

Note di Matematica **22**, n. 1, 2003, 107–154.

On rank 2 and rank 3 residually connected geometries for M_{22}

Nayil Kilic

*Department of Mathematics, UMIST,
P.O. Box 88, Manchester, M60 1QD, UK.
mcbignk3@stud.umist.ac.uk*

Peter Rowley

*Department of Mathematics, UMIST,
P.O. Box 88, Manchester, M60 1QD, UK.
peter.rowley@umist.ac.uk*

Received: 29/11/2002; accepted: 29/7/2003.

Abstract. We determine all rank 2 and rank 3 residually connected flag transitive geometries for the Mathieu group M_{22} for which object stabilizer are maximal subgroups.

Keywords: Residually connected flag transitive geometries, Mathieu group

MSC 2000 classification: 51Exx

Introduction

In this paper we shall describe all rank 2 and rank 3 residually connected flag transitive geometries for the Mathieu group M_{22} whose object stabilizers are maximal subgroups. We begin by reviewing geometries and some standard notation. A geometry is a triple (Γ, I, \star) where Γ is a set, I an index set and \star a symmetric incidence relation on Γ which satisfy

- (i) $\Gamma = \bigcup_{i \in I} \Gamma_i$; and
- (ii) if $x \in \Gamma_i$, $y \in \Gamma_j$ ($i, j \in I$) and $x \star y$, then $i \neq j$.

The elements of Γ_i are called objects of type i , and $|I|$ is the rank of the geometry Γ (as is usual we use Γ is place of the triple (Γ, I, \star)). A flag F of Γ is a subset of Γ which, for all $x, y \in F$, $x \neq y$, $x \star y$. The rank of F is $|F|$, the corank of F is $|I \setminus F|$ and the type of F is $\{i \in I | F \cap \Gamma_i \neq \emptyset\}$. All geometries we consider are assumed to contain at least one flag of rank $|I|$. The automorphism group of Γ , $Aut\Gamma$, consists of all permutations of Γ which preserve the sets Γ_i and the incidence relation \star . Let G be a subgroup of $Aut\Gamma$. We call Γ a flag transitive geometry for G if for any two flags F_1 and F_2 of Γ having the same type, there exists $g \in G$ such that $F_1^g = F_2$. For $\Delta \subseteq \Gamma$, the residue of Δ , denoted Γ_Δ , is defined to be $\{x \in \Gamma | x \star y \text{ for all } y \in \Delta\}$. A geometry Γ is called residually connected if for all flags F of Γ of corank 2 the incidence graph of

Γ_F is connected. Now suppose that Γ is a flag transitive geometry for the group G . As is well-known we may view Γ in terms of certain cosets of G . This is the approach we shall follow here. For each $i \in I$ choose an $x_i \in \Gamma_i$ and set $G_i = Stab_G(x_i)$. Let $\mathcal{F} = \{G_i : i \in I\}$. We now define a geometry $\Gamma(G, \mathcal{F})$ where the objects of type i in $\Gamma(G, \mathcal{F})$ are the right cosets of G_i in G and for $G_i x$ and $G_j y$ ($x, y \in G, i, j \in I$) $G_i x \star G_j y$ whenever $G_i x \cap G_j y \neq \emptyset$. Also by letting G act upon $\Gamma(G, \mathcal{F})$ by right multiplication we see that $\Gamma(G, \mathcal{F})$ is a flag transitive geometry for G . Moreover Γ and $\Gamma(G, \mathcal{F})$ are isomorphic geometries for G . So we shall be studying geometries of the form $\Gamma(G, \mathcal{F})$, where $G \cong M_{22}$ and G_i is a maximal subgroup of G for all $i \in I$. A numerical summary of our results is given in

1 Theorem. *Suppose $G \cong M_{22}$ and Γ is a residually connected flag transitive geometry for G with $Stab_G(x)$ a maximal subgroup of G for all $x \in \Gamma$.*

(i) *If Γ has rank 2, then, up to conjugacy in $AutG$, there are 86 possibilities for Γ .*

(ii) *If Γ has rank 3, then, up to conjugacy in $AutG$, there are 1239 possibilities for Γ .*

In Section 2 and 3 we give explicit descriptions of these geometries making heavy use of the degree 22 permutation representation for M_{22} . The descriptions given readily allow further investigation of these geometries. For the verification of these lists and more details we refer the reader to [6].

Beukenhout, in [1], sought to give a wider view of geometries so as to encompass configurations observed in the finite sporadic simple groups. An outgrowth of this has been attempts to catalogue various subcollections of geometries for the finite sporadic simple groups (and other related groups). So - called minimal parabolic geometries and maximal 2-local geometries were investigated in [13] and [14] while geometries satisfying certain additional conditions for a number of (relatively) small order simple groups have been exhaustively examined. See, for example, [2], [5], [7], [8], [9], [10], [11], [12], [15]; the results in most of these papers were obtained using various computer algebra systems. The lists here, by contrast, has been obtained by "hand".

For the remainder of this paper G will denote M_{22} , the Mathieu Group of degree 22. Also Ω will denote a 24 element set possessing the Steiner system $S(24, 8, 5)$ as described by Curtis's MOG [4]. We will follow the notation of [4].

So

$$\Omega = \begin{array}{|c|c|c|} \hline O_1 & O_2 & O_3 \\ \hline \end{array} = \begin{array}{|c|c|c|c|c|} \hline \infty & 14 & 17 & 11 & 22 & 19 \\ \hline 0 & 8 & 4 & 13 & 1 & 9 \\ \hline 3 & 20 & 16 & 7 & 12 & 5 \\ \hline 15 & 18 & 10 & 2 & 21 & 6 \\ \hline \end{array},$$

where O_1 , O_2 and O_3 are the heavy bricks of the MOG. For our later concrete

descriptions we shall identify G with $\text{Stab}_{M_{24}}\{\infty\} \cap \text{Stab}_{M_{24}}\{14\}$. Here M_{24} is the Mathieu group of degree 24 which leaves invariant the Steiner system $S(24, 8, 5)$ on Ω . Set $\Lambda = \Omega \setminus \{\infty, 14\}$. We shall discuss certain (well-known) combinatorial objects associated with Ω and Λ . An octad of Ω is just an 8-element block of the Steiner system and a subset of Ω is called a dodecad if it is the symmetric difference of two octads of Ω which intersect in a set of size two. The following sets will appear frequently when we describe geometries for G .

- (i) $\mathcal{H} = \{X \subseteq \Lambda | X \cup \{\infty, 14\} \text{ is an octad of } \Omega\}$ (hexads of Λ).
- (ii) $\mathcal{H}_p = \{X \subseteq \Lambda | X \cup \{14\} \text{ is an octad of } \Omega\}$ (heptads of Λ).
- (iii) $\mathcal{H}_{p_\infty} = \{X \subseteq \Lambda | X \cup \{\infty\} \text{ is an octad of } \Omega\}$ (heptads of Λ).
- (iv) $\mathcal{O} = \{X \subseteq \Lambda | X \text{ is an octad of } \Omega\}$ (octads of Λ).
- (v) $\mathcal{D} = \{X \subseteq \Lambda | |X| = 2\}$ (duads of Λ).
- (vi) $\mathcal{D}_o = \{X \subseteq \Lambda | X \text{ is a dodecad of } \Omega\}$ (dodecads of Λ).
- (vii) $\mathcal{E} = \{X \subseteq \Lambda | \text{one of } X \cup \{\infty\} \text{ and } X \cup \{14\} \text{ is a dodecad of } \Omega\}$ (endecads of Λ).

From the [3], the conjugacy classes of the maximal subgroups of G are as follows:

<i>Order</i>	<i>Index</i>	M_i	<i>Description</i>
20160	22	$M_1 \cong L_3(4)$	$M_1 = \text{Stab}_G\{a\}, a \in \Lambda$
5760	77	$M_2 \cong 2^4 : A_6$	$M_2 = \text{Stab}_G\{X\}, X \in \mathcal{H}$
2520	176	$M_3 \cong A_7$	$M_3 = \text{Stab}_G\{X\}, X \in \mathcal{H}_p$
2520	176	$M_4 \cong A_7$	$M_4 = \text{Stab}_G\{X\}, X \in \mathcal{H}_{p_\infty}$
1344	330	$M_5 \cong 2^3 : L_3(2)$	$M_5 = \text{Stab}_G\{X\}, X \in \mathcal{O}$
1920	231	$M_6 \cong 2^4 : S_5$	$M_6 = \text{Stab}_G\{X\}, X \in \mathcal{D}$
720	616	$M_7 \cong M_{10}$	$M_7 = \text{Stab}_G\{X\}, X \in \mathcal{D}_o$
660	672	$M_8 \cong L_2(11)$	$M_8 = \text{Stab}_G\{X\}, X \in \mathcal{E}$

For $i \in \{1, \dots, 8\}$, we let \mathfrak{M}_i denote the conjugacy class of M_i , M_i as given in the previous table. We also set $\mathfrak{M} = \bigcup_{i=1}^8 \mathfrak{M}_i$; so \mathfrak{M} consist of all maximal subgroups of G . Also put $\mathfrak{X} = \Lambda \cup \mathcal{H} \cup \mathcal{H}_p \cup \mathcal{H}_{p_\infty} \cup \mathcal{O} \cup \mathcal{D} \cup \mathcal{D}_o \cup \mathcal{E}$. For $X, Y \in \mathfrak{X}$ we have that $X = Y$ if and only if $\text{Stab}_G\{X\} = \text{Stab}_G\{Y\}$ except in the case when $X, Y \in \mathcal{E}$. In this latter case when $Y = \Lambda \setminus X$ we have $\text{Stab}_G\{X\} = \text{Stab}_G\{Y\} (\cong L_2(11))$. In order to have a $(1-1)$ correspondence between subgroups in \mathfrak{M} and appropriate sets of Λ in \mathfrak{X} , for endecads we shall always choose $X \in \mathcal{E}$ so as $X \cup \{\infty\}$ is a dodecad of Ω .

Suppose G_1 and G_2 are maximal subgroups of G with $G_1 \neq G_2$. Set $G_{12} = G_1 \cap G_2$. We use $\mathfrak{M}_{ij}(t)$ to describe $\{G_1, G_2, G_1 \cap G_2\}$ according to the following scheme: $G_1 \in \mathfrak{M}_i$, $G_2 \in \mathfrak{M}_j$ (and so $G_1 = \text{Stab}_G(X_1)$ and $G_2 = \text{Stab}_G(X_2)$ for some appropriate subsets X_1 and X_2 of Λ in \mathfrak{X}) with $|X_1 \cap X_2| = t$. When listing up the rank 2 geometries of G in Theorem 2 the notation $\mathfrak{M}_{ij}(t)$ frequently suffices to describe the geometries up to conjugacy in $\text{Aut}G$. To distinguish

those geometries where this is not the case we shall write $\mathfrak{M}_{ij}(t_l)$ with $l \in \{1, 2\}$; see after Theorem 2 for the details of these cases. Now suppose we have three distinct maximal subgroup of G , G_1, G_2 and G_3 . We shall use G_{12}, G_{13}, G_{23} and G_{123} to denote, respectively $G_1 \cap G_2$, $G_1 \cap G_3$, $G_2 \cap G_3$ and $G_1 \cap G_2 \cap G_3$. We extend the above notation using $\mathfrak{M}_{ijk}(t_{ij}, t_{ik}, t_{jk})$ to indicate that $G_1 \in \mathfrak{M}_i$, $G_2 \in \mathfrak{M}_j$, $G_3 \in \mathfrak{M}_k$ with $|X_i \cap X_j| = t_{ij}$, $|X_i \cap X_k| = t_{ik}$ and $|X_j \cap X_k| = t_{jk}$. (Here $G_1 = \text{Stab}_G(X_i)$, $G_2 = \text{Stab}_G(X_j)$ and $G_3 = \text{Stab}_G(X_k)$ for suitable subsets X_i, X_j and X_k of Λ in \mathfrak{X} .) Again we run into the possibility that in some instances, we need to further subdivide these cases, and we do this using the ad hoc notation $\mathfrak{M}_{ijk}(t_{ij}, t_{ik}, t_{jk}; l)$ where $l \in \{1, 2, 3\}$. See the end of Section 2 for further explanation of this notation. There is a further complexity caused by the division in the rank 2 cases mentioned earlier. In order to accommodate this we use, for example $\mathfrak{M}_{155}(0, 0, 4_1; 2)$ in Theorem 3 to tell us that, not only is $|X_j \cap X_k| = 4$ but we are in “Case 1” of this situation as described in Theorem 2. We note that if two or more of i, j and k are equal, apparently different parameters t_{ij}, t_{ik}, t_{jk} may describe the same situation. For example $\mathfrak{M}_{333}(1, 1, 3)$ and $\mathfrak{M}_{333}(3, 1, 1)$ describe the same configuration as do $\mathfrak{M}_{335}(1, 2, 4)$ and $\mathfrak{M}_{335}(1, 4, 2)$.

We remark that the geometry $\Gamma = \Gamma(G, \mathcal{F})$ where $\mathcal{F} = \{G_1, G_2, G_3\}$ is residually connected if and only if $G_1 = \langle G_{12}, G_{13} \rangle$, $G_2 = \langle G_{12}, G_{23} \rangle$ and $G_3 = \langle G_{13}, G_{23} \rangle$. Also we observe that the conjugacy classes \mathfrak{M}_3 and \mathfrak{M}_4 fuse in $\text{Aut}G$.

Below we give certain subsets of Λ which will be encountered frequently in our lists.

$$h_1 = \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & \times & \\ \hline \times & \times & \\ \hline \end{array}, h_2 = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}, h_3 = \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & \times & \\ \hline & & \\ \hline \end{array}$$

$$h_4 = \begin{array}{|c|c|c|} \hline \times & \times & \times \\ \hline \times & \times & \times \\ \hline & & \\ \hline \end{array}, h_5 = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}, h_6 = \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & & \\ \hline & & \times \\ \hline & & \times \\ \hline \end{array}$$

$$h_1^* = \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & \times & \\ \hline \times & \times & \\ \hline \end{array}, h_2^* = \begin{array}{|c|c|c|} \hline \times & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, h_3^* = \begin{array}{|c|c|c|} \hline \times & \times & \\ \hline \times & \times & \\ \hline \times & \times & \\ \hline \end{array}$$

$$\begin{aligned}
h_4^* &= \begin{array}{|c|c|c|} \hline & \times & \times \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad h_5^* = \begin{array}{|c|c|c|} \hline & \times & \\ \hline \times & & \times \\ \hline \times & & \times \\ \hline \end{array}, \quad h_6^* = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array} \\
h_7^* &= \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad h_8^* = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \times \times \\ \hline & & \times \times \\ \hline \end{array}, \quad h_9^* = \begin{array}{|c|c|c|} \hline & \times & \times \times \\ \hline \times & & \times \\ \hline & \times & \\ \hline \end{array} \\
h_{10}^* &= \begin{array}{|c|c|c|} \hline & \times & \times \times \\ \hline \times & & \times \\ \hline & \times & \\ \hline \end{array}
\end{aligned}$$

$$\begin{aligned}
O_4 &= \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad O_5 = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad O_6 = \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array} \\
O_7 &= \begin{array}{|c|c|c|} \hline & \times \times & \times \times \\ \hline \times \times & & \\ \hline \times \times & & \\ \hline \end{array}
\end{aligned}$$

$$d_1 = \begin{array}{|c|c|c|} \hline \times \times & \times \times & \times \\ \hline \times \times & & \\ \hline \times \times & & \\ \hline \end{array}, \quad d_2 = \begin{array}{|c|c|c|} \hline \times \times & \times \times & \times \\ \hline \times \times & & \\ \hline \times \times & & \\ \hline \end{array}, \quad d_3 = \begin{array}{|c|c|c|} \hline \times \times & \times \times & \times \\ \hline & \times \times & \\ \hline & \times \times & \\ \hline \end{array}$$

$$\begin{aligned}
e_1 &= \begin{array}{|c|c|c|} \hline & \times & \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad e_2 = \begin{array}{|c|c|c|} \hline & \times \times & \times \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}, \quad e_3 = \begin{array}{|c|c|c|} \hline & \times \times & \times \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array} \\
e_3 &= \begin{array}{|c|c|c|} \hline \times & \times \times & \times \times \\ \hline \times & \times \times & \\ \hline \times & \times \times & \\ \hline \end{array}
\end{aligned}$$

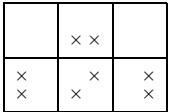
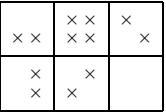
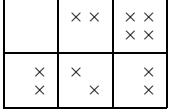
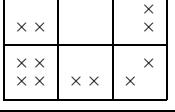
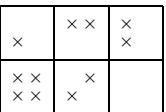
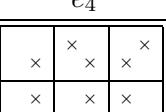
Our notation is as in the [3] with the following addition: SD_n is the semidihedral group of order n , F_n a Frobenious group of order n and $(S_n \times S_m)^+$ is the group of even permutation in the permutation group $S_n \times S_m$.

1 Rank 2 geometries of M_{22}

2 Theorem. *Up to conjugacy in $\text{Aut}G$ there are 86 rank 2 geometries $\Gamma = \Gamma(G, \{G_1, G_2\})$ with $G_1, G_2 \in \mathfrak{M}$. These together with the shape of G_{12} , are listed in the following table.*

Γ	G_{12}	Γ	G_{12}	Γ	G_{12}
$\mathfrak{M}_{11}(0)$	$2^4 A_5$	$\mathfrak{M}_{12}(0)$	A_6	$\mathfrak{M}_{12}(1)$	$2^4 A_5$
$\mathfrak{M}_{13}(0)$	$L_3(2)$	$\mathfrak{M}_{13}(1)$	A_6	$\mathfrak{M}_{15}(0)$	$2^4 S_3$
$\mathfrak{M}_{15}(1)$	$L_3(2)$	$\mathfrak{M}_{16}(0)$	$2^4 S_3$	$\mathfrak{M}_{16}(1)$	$2^4 A_5$
$\mathfrak{M}_{17}(0)$	M_9	$\mathfrak{M}_{17}(1)$	A_5	$\mathfrak{M}_{18}(0)$	A_5
$\mathfrak{M}_{18}(1)$	A_5				
$\mathfrak{M}_{22}(0)$	A_6	$\mathfrak{M}_{22}(2)$	$2^2 S_4$	$\mathfrak{M}_{23}(1)$	A_5
$\mathfrak{M}_{23}(3)$	$(S_3 \times S_4)^+$	$\mathfrak{M}_{25}(0)$	$2^3 S_4$	$\mathfrak{M}_{25}(2)$	S_4
$\mathfrak{M}_{25}(4)$	$2^2 S_4$	$\mathfrak{M}_{26}(0)$	$2 \times S_4$	$\mathfrak{M}_{26}(1)$	A_5
$\mathfrak{M}_{26}(2)$	$2^4 S_4$	$\mathfrak{M}_{27}(2)$	S_4	$\mathfrak{M}_{27}(4)$	SD_{16}
$\mathfrak{M}_{27}(6)$	A_6	$\mathfrak{M}_{28}(1)$	A_5	$\mathfrak{M}_{28}(3)$	D_{12}
$\mathfrak{M}_{28}(5)$	A_5				
$\mathfrak{M}_{33}(1)$	$3^2 4$	$\mathfrak{M}_{33}(3)$	S_4	$\mathfrak{M}_{34}(0)$	$L_3(2)$
$\mathfrak{M}_{34}(2)$	F_{20}	$\mathfrak{M}_{34}(4)$	$(S_3 \times S_4)^+$	$\mathfrak{M}_{35}(0)$	$L_3(2)$
$\mathfrak{M}_{35}(2)$	D_{12}	$\mathfrak{M}_{35}(4)$	S_4	$\mathfrak{M}_{36}(0)$	S_4
$\mathfrak{M}_{36}(1)$	S_4	$\mathfrak{M}_{36}(2)$	S_5	$\mathfrak{M}_{37}(2)$	F_{20}
$\mathfrak{M}_{37}(4)$	S_3	$\mathfrak{M}_{37}(6)$	$3^2 4$	$\mathfrak{M}_{38}(2)$	D_{12}
$\mathfrak{M}_{38}(4)$	S_3	$\mathfrak{M}_{38}(6)$	A_5		
$\mathfrak{M}_{55}(0)$	$2^3 S_4$	$\mathfrak{M}_{55}(2)$	D_8	$\mathfrak{M}_{55}(4_1)$	A_4
$\mathfrak{M}_{55}(4_2)$	$2^4 2$	$\mathfrak{M}_{56}(0_1)$	$2^4(2 \times S_3)$	$\mathfrak{M}_{56}(0_2)$	$2 \times D_8$
$\mathfrak{M}_{56}(1)$	A_4	$\mathfrak{M}_{56}(2)$	$2^2(2 \times S_3)$	$\mathfrak{M}_{57}(2)$	S_4
$\mathfrak{M}_{57}(4_1)$	S_4	$\mathfrak{M}_{57}(4_2)$	4	$\mathfrak{M}_{57}(6)$	D_8
$\mathfrak{M}_{58}(2)$	D_{12}	$\mathfrak{M}_{58}(4_1)$	2^2	$\mathfrak{M}_{58}(4_2)$	A_4
$\mathfrak{M}_{58}(6)$	D_{12}				
$\mathfrak{M}_{66}(0_1)$	D_{12}	$\mathfrak{M}_{66}(0_2)$	$2^3 D_8$	$\mathfrak{M}_{66}(1)$	$2^4 3$
$\mathfrak{M}_{67}(0)$	SD_{16}	$\mathfrak{M}_{67}(1)$	S_3	$\mathfrak{M}_{67}(2_1)$	F_{20}
$\mathfrak{M}_{67}(2_2)$	S_4	$\mathfrak{M}_{68}(0)$	D_{12}	$\mathfrak{M}_{68}(1_1)$	D_{10}
$\mathfrak{M}_{68}(1_2)$	A_4	$\mathfrak{M}_{68}(2)$	D_{12}		
$\mathfrak{M}_{77}(4)$	SD_{16}	$\mathfrak{M}_{77}(6)$	2	$\mathfrak{M}_{77}(8_1)$	4
$\mathfrak{M}_{77}(8_2)$	S_4	$\mathfrak{M}_{78}(4)$	S_3	$\mathfrak{M}_{78}(6_1)$	D_{10}
$\mathfrak{M}_{78}(6_2)$	2	$\mathfrak{M}_{78}(8)$	S_3		
$\mathfrak{M}_{88}(3)$	D_{12}	$\mathfrak{M}_{88}(5_1)$	2	$\mathfrak{M}_{88}(5_2)$	D_{10}
$\mathfrak{M}_{88}(7_1)$	2^2	$\mathfrak{M}_{88}(7_2)$	A_4		

We now define the subgroups for $\mathfrak{M}_{ij}(t_l)$ ($l \in \{1, 2\}$) by giving the $X_i \in \mathfrak{X}$ such that $G_i = Stab_G X_i$ ($i = 1, 2$).

$\mathfrak{M}_{ij}(t_l)$	X_1	X_2
$\mathfrak{M}_{55}(4_1)$	O_2	O_6
$\mathfrak{M}_{55}(4_2)$	O_2	O_7
$\mathfrak{M}_{56}(O_1)$	O_2	$\{0, 8\}$
$\mathfrak{M}_{56}(O_2)$	O_2	$\{19, 22\}$
$\mathfrak{M}_{57}(4_1)$	O_3	d_1
$\mathfrak{M}_{57}(4_2)$		d_1
$\mathfrak{M}_{58}(4_1)$	O_7	e_2
$\mathfrak{M}_{58}(4_2)$	O_3	e_1
$\mathfrak{M}_{66}(0_1)$	$\{11, 17\}$	$\{19, 22\}$
$\mathfrak{M}_{66}(0_2)$	$\{0, 8\}$	$\{3, 20\}$
$\mathfrak{M}_{67}(2_1)$	$\{8, 17\}$	d_1
$\mathfrak{M}_{67}(2_2)$	$\{11, 17\}$	d_1
$\mathfrak{M}_{68}(1_1)$	$\{1, 22\}$	e_2
$\mathfrak{M}_{68}(1_2)$	$\{11, 17\}$	e_1
$\mathfrak{M}_{77}(8_1)$	d_1	
$\mathfrak{M}_{77}(8_2)$	d_1	d_2
$\mathfrak{M}_{78}(6_1)$		e_2
$\mathfrak{M}_{78}(6_2)$		e_1
$\mathfrak{M}_{88}(5_1)$	e_2	
$\mathfrak{M}_{88}(5_2)$	e_2	
$\mathfrak{M}_{88}(7_1)$	e_2	e_4
$\mathfrak{M}_{88}(7_2)$	e_1	

2 Rank 3 geometries of M_{22}

3 Theorem. *Up to conjugacy in $\text{Aut}G$ there are 1239 rank 3 residually connected geometries $\Gamma = \Gamma(G, \{G_1, G_2, G_3\})$ with $G_1, G_2, G_3 \in \mathfrak{M}$. These together with the shape of G_{123} are listed in the following table below*

Γ	G_{123}	Γ	G_{123}
$\mathfrak{M}_{111}(0, 0, 0)$	$2^4 3$	$\mathfrak{M}_{112}(0, 0, 0)$	S_4
$\mathfrak{M}_{112}(0, 0, 1)$	A_5	$\mathfrak{M}_{112}(0, 1, 1)$	$2^4 A_4$
$\mathfrak{M}_{113}(0, 0, 0)$	A_4	$\mathfrak{M}_{113}(0, 0, 1)$	S_4
$\mathfrak{M}_{113}(0, 1, 1)$	A_5		
$\mathfrak{M}_{115}(0, 0, 0)$	2^3	$\mathfrak{M}_{115}(0, 0, 1)$	A_4
$\mathfrak{M}_{115}(0, 1, 1)$	S_4		
$\mathfrak{M}_{116}(0, 0, 0 : 1)$	$2^4 2$	$\mathfrak{M}_{116}(0, 0, 0 : 2)$	S_3
$\mathfrak{M}_{116}(0, 1, 0)$	$2^4 3$		
$\mathfrak{M}_{117}(0, 1, 0)$	S_3	$\mathfrak{M}_{117}(0, 0, 0)$	Q_8
$\mathfrak{M}_{118}(0, 1, 1)$	S_3	$\mathfrak{M}_{118}(0, 0, 1 : 1)$	A_4
$\mathfrak{M}_{118}(0, 0, 1 : 2)$	D_{10}		
$\mathfrak{M}_{122}(0, 0, 0)$	$3^2 4$	$\mathfrak{M}_{122}(0, 1, 0)$	A_5
$\mathfrak{M}_{122}(0, 0, 2)$	D_8	$\mathfrak{M}_{122}(1, 0, 2)$	S_4
$\mathfrak{M}_{122}(1, 1, 2)$	$2^2 A_4$		
$\mathfrak{M}_{123}(0, 0, 1)$	S_3	$\mathfrak{M}_{123}(0, 1, 1)$	D_{10}
$\mathfrak{M}_{123}(1, 0, 1)$	A_4	$\mathfrak{M}_{123}(0, 0, 3)$	S_3
$\mathfrak{M}_{123}(0, 1, 3)$	$3^2 2$	$\mathfrak{M}_{123}(1, 0, 3)$	S_4
$\mathfrak{M}_{123}(1, 1, 3)$	S_4		
$\mathfrak{M}_{125}(0, 0, 0)$	S_4	$\mathfrak{M}_{125}(0, 1, 0)$	S_4
$\mathfrak{M}_{125}(1, 0, 0)$	$2^2 D_8$	$\mathfrak{M}_{125}(0, 1, 2)$	4
$\mathfrak{M}_{125}(0, 0, 2 : 1)$	S_3	$\mathfrak{M}_{125}(0, 0, 2 : 2)$	2^2
$\mathfrak{M}_{125}(1, 0, 2)$	S_3	$\mathfrak{M}_{125}(1, 1, 2)$	A_4
$\mathfrak{M}_{125}(0, 0, 4)$	D_8	$\mathfrak{M}_{125}(0, 1, 4)$	S_4
$\mathfrak{M}_{125}(1, 1, 4)$	S_4	$\mathfrak{M}_{125}(1, 0, 4)$	$2^2 A_4$
$\mathfrak{M}_{126}(0, 0, 0 : 1)$	S_3	$\mathfrak{M}_{126}(0, 0, 0 : 2)$	D_8
$\mathfrak{M}_{126}(1, 0, 0)$	2^3	$\mathfrak{M}_{126}(0, 1, 0)$	S_4
$\mathfrak{M}_{126}(0, 0, 1)$	2^2	$\mathfrak{M}_{126}(1, 0, 1)$	A_4
$\mathfrak{M}_{126}(0, 0, 2)$	S_4	$\mathfrak{M}_{126}(1, 1, 2)$	$2^4 A_4$
$\mathfrak{M}_{127}(0, 0, 2)$	4	$\mathfrak{M}_{127}(1, 0, 2)$	S_3
$\mathfrak{M}_{127}(0, 0, 4)$	2	$\mathfrak{M}_{127}(0, 1, 4)$	2
$\mathfrak{M}_{127}(1, 1, 4)$	2^2	$\mathfrak{M}_{127}(1, 0, 4)$	Q_8
$\mathfrak{M}_{127}(0, 0, 6)$	$3^2 4$		
$\mathfrak{M}_{128}(0, 1, 1)$	S_3	$\mathfrak{M}_{128}(0, 0, 1)$	D_{10}
$\mathfrak{M}_{128}(1, 0, 1)$	A_4	$\mathfrak{M}_{128}(0, 1, 3 : 1)$	S_3
$\mathfrak{M}_{128}(0, 1, 3 : 2)$	2	$\mathfrak{M}_{128}(0, 0, 3 : 1)$	S_3
$\mathfrak{M}_{128}(0, 0, 3 : 2)$	2	$\mathfrak{M}_{128}(1, 0, 3)$	2^2

$\mathfrak{M}_{128}(1, 1, 3)$	2^2		
$\mathfrak{M}_{133}(0, 0, 1)$	4	$\mathfrak{M}_{133}(1, 0, 1)$	S_3
$\mathfrak{M}_{133}(0, 0, 3 : 1)$	S_3	$\mathfrak{M}_{133}(0, 0, 3 : 2)$	D_8
$\mathfrak{M}_{133}(0, 3, 1)$	S_3	$\mathfrak{M}_{133}(1, 1, 3)$	D_8
$\mathfrak{M}_{134}(0, 0, 0)$	F_{21}	$\mathfrak{M}_{134}(1, 0, 0)$	S_4
$\mathfrak{M}_{134}(0, 0, 2)$	2	$\mathfrak{M}_{134}(0, 1, 2)$	4
$\mathfrak{M}_{134}(1, 1, 2)$	D_{10}	$\mathfrak{M}_{134}(0, 0, 4)$	S_3
$\mathfrak{M}_{134}(1, 1, 4)$	$3^2 2$	$\mathfrak{M}_{134}(1, 0, 4)$	S_4
$\mathfrak{M}_{135}(0, 1, 0)$	F_{21}	$\mathfrak{M}_{135}(0, 0, 0)$	S_4
$\mathfrak{M}_{135}(1, 0, 0)$	S_4	$\mathfrak{M}_{135}(0, 1, 2)$	2
$\mathfrak{M}_{135}(0, 0, 2 : 1)$	2	$\mathfrak{M}_{135}(0, 0, 2 : 2)$	2^2
$\mathfrak{M}_{135}(1, 0, 2 : 1)$	2^2	$\mathfrak{M}_{135}(1, 0, 2 : 2)$	S_3
$\mathfrak{M}_{135}(1, 1, 2)$	S_3	$\mathfrak{M}_{135}(0, 0, 4 : 1)$	D_8
$\mathfrak{M}_{135}(0, 0, 4 : 2)$	3	$\mathfrak{M}_{135}(1, 1, 4)$	S_3
$\mathfrak{M}_{135}(0, 1, 4)$	S_3	$\mathfrak{M}_{135}(1, 0, 4)$	D_8
$\mathfrak{M}_{136}(0, 0, 0)$	2	$\mathfrak{M}_{136}(1, 0, 0)$	S_3
$\mathfrak{M}_{136}(0, 1, 1)$	A_4	$\mathfrak{M}_{136}(0, 0, 1 : 1)$	3
$\mathfrak{M}_{136}(0, 0, 1 : 2)$	2^2	$\mathfrak{M}_{136}(1, 0, 1)$	2^2
$\mathfrak{M}_{136}(0, 0, 2)$	D_8	$\mathfrak{M}_{136}(1, 0, 2)$	S_4
$\mathfrak{M}_{136}(1, 1, 2)$	A_5		
$\mathfrak{M}_{137}(0, 1, 2)$	2	$\mathfrak{M}_{137}(0, 0, 2)$	4
$\mathfrak{M}_{137}(1, 0, 2)$	4	$\mathfrak{M}_{137}(1, 1, 2)$	D_{10}
$\mathfrak{M}_{137}(0, 0, 4)$	1	$\mathfrak{M}_{137}(1, 0, 4)$	2
$\mathfrak{M}_{137}(0, 0, 6)$	4	$\mathfrak{M}_{137}(0, 1, 6)$	S_3
$\mathfrak{M}_{137}(1, 1, 6)$	S_3		
$\mathfrak{M}_{138}(0, 1, 2 : 1)$	2	$\mathfrak{M}_{138}(0, 1, 2 : 2)$	2^2
$\mathfrak{M}_{138}(0, 0, 2)$	2	$\mathfrak{M}_{138}(1, 0, 2 : 1)$	2^2
$\mathfrak{M}_{138}(1, 0, 2 : 2)$	S_3	$\mathfrak{M}_{138}(1, 1, 2)$	S_3
$\mathfrak{M}_{138}(0, 1, 4)$	1	$\mathfrak{M}_{138}(0, 0, 4 : 1)$	2
$\mathfrak{M}_{138}(0, 0, 4 : 2)$	3	$\mathfrak{M}_{138}(1, 0, 4)$	2
$\mathfrak{M}_{138}(0, 0, 6)$	S_3	$\mathfrak{M}_{138}(1, 1, 6)$	D_{10}
$\mathfrak{M}_{138}(0, 1, 6)$	A_4		
$\mathfrak{M}_{155}(0, 1, 0)$	S_4	$\mathfrak{M}_{155}(0, 0, 2)$	2
$\mathfrak{M}_{155}(0, 1, 2)$	2	$\mathfrak{M}_{155}(1, 1, 2)$	4
$\mathfrak{M}_{155}(0, 0, 4_1 : 1)$	3	$\mathfrak{M}_{155}(0, 0, 4_1 : 2)$	2^2
$\mathfrak{M}_{155}(1, 0, 4_1)$	3	$\mathfrak{M}_{155}(1, 1, 4_1)$	3
$\mathfrak{M}_{155}(0, 0, 4_2)$	2^2	$\mathfrak{M}_{155}(0, 1, 4_2)$	D_8

$\mathfrak{M}_{155}(1, 1, 4_2)$	D_8		
$\mathfrak{M}_{156}(0, 0, 0_1)$	$2^2 2^2$	$\mathfrak{M}_{156}(1, 0, 0_1)$	S_4
$\mathfrak{M}_{156}(0, 0, 0_2)$	2	$\mathfrak{M}_{156}(1, 0, 0_2)$	2
$\mathfrak{M}_{156}(0, 1, 0_2)$	2^3	$\mathfrak{M}_{156}(0, 0, 1)$	1
$\mathfrak{M}_{156}(1, 0, 1)$	3	$\mathfrak{M}_{156}(0, 0, 2 : 1)$	S_3
$\mathfrak{M}_{156}(0, 0, 2 : 2)$	2^3	$\mathfrak{M}_{156}(1, 0, 2)$	2^3
$\mathfrak{M}_{156}(1, 1, 2)$	S_4		
$\mathfrak{M}_{157}(1, 0, 2)$	4	$\mathfrak{M}_{157}(0, 0, 2)$	S_3
$\mathfrak{M}_{157}(0, 0, 4_1)$	4	$\mathfrak{M}_{157}(1, 0, 4_1)$	S_3
$\mathfrak{M}_{157}(0, 0, 4_2)$	1	$\mathfrak{M}_{157}(1, 0, 4_2)$	1
$\mathfrak{M}_{157}(1, 1, 4_2)$	1	$\mathfrak{M}_{157}(0, 1, 4_2 : 1)$	S_3
$\mathfrak{M}_{157}(0, 1, 4_2 : 2)$	2	$\mathfrak{M}_{157}(0, 0, 6)$	2
$\mathfrak{M}_{157}(1, 0, 6)$	4		
$\mathfrak{M}_{158}(0, 1, 2 : 1)$	2	$\mathfrak{M}_{158}(0, 1, 2 : 2)$	2^2
$\mathfrak{M}_{158}(1, 0, 2)$	2	$\mathfrak{M}_{158}(0, 0, 2)$	2^2
$\mathfrak{M}_{158}(1, 1, 2)$	S_3	$\mathfrak{M}_{158}(0, 1, 4_1 : 1)$	2
$\mathfrak{M}_{158}(0, 1, 4_1 : 2)$	1	$\mathfrak{M}_{158}(0, 0, 4_1 : 1)$	1
$\mathfrak{M}_{158}(0, 0, 4_1 : 2)$	2	$\mathfrak{M}_{158}(1, 1, 4_1)$	2
$\mathfrak{M}_{158}(1, 0, 4_1)$	2	$\mathfrak{M}_{158}(0, 1, 4_2)$	2
$\mathfrak{M}_{158}(0, 0, 4_2)$	2	$\mathfrak{M}_{158}(1, 1, 4_2)$	3
$\mathfrak{M}_{158}(1, 0, 4_2)$	3	$\mathfrak{M}_{158}(1, 1, 6)$	2
$\mathfrak{M}_{158}(0, 0, 6 : 1)$	2^2	$\mathfrak{M}_{158}(0, 0, 6 : 2)$	2
$\mathfrak{M}_{158}(0, 1, 6 : 1)$	S_3	$\mathfrak{M}_{158}(0, 1, 6 : 2)$	2^2
$\mathfrak{M}_{158}(1, 0, 6)$	S_3		
$\mathfrak{M}_{166}(0, 0, 0_1 : 1)$	2^2	$\mathfrak{M}_{166}(0, 0, 0_1 : 2)$	2
$\mathfrak{M}_{166}(1, 0, 0_1)$	S_3	$\mathfrak{M}_{166}(0, 0, 0_2)$	2^2
$\mathfrak{M}_{166}(0, 0, 1)$	3		
$\mathfrak{M}_{167}(0, 1, 0)$	2	$\mathfrak{M}_{167}(0, 0, 0)$	2
$\mathfrak{M}_{167}(1, 0, 0)$	Q_8	$\mathfrak{M}_{167}(0, 0, 1 : 1)$	2
$\mathfrak{M}_{167}(0, 0, 1 : 2)$	1	$\mathfrak{M}_{167}(0, 1, 2_1)$	2
$\mathfrak{M}_{167}(0, 0, 2_1)$	4	$\mathfrak{M}_{167}(1, 1, 2_1)$	D_{10}
$\mathfrak{M}_{167}(0, 0, 2_2)$	4		
$\mathfrak{M}_{168}(0, 0, 1_1)$	2	$\mathfrak{M}_{168}(0, 1, 1_1)$	2
$\mathfrak{M}_{168}(0, 0, 1_2)$	2	$\mathfrak{M}_{168}(0, 1, 1_2)$	2
$\mathfrak{M}_{168}(0, 0, 0 : 1)$	2	$\mathfrak{M}_{168}(0, 0, 0 : 2)$	2^2
$\mathfrak{M}_{168}(0, 1, 0 : 1)$	2	$\mathfrak{M}_{168}(0, 1, 0 : 2)$	2^2
$\mathfrak{M}_{168}(0, 1, 0 : 3)$	S_3	$\mathfrak{M}_{168}(1, 0, 0)$	S_3

$\mathfrak{M}_{168}(0, 0, 2 : 1)$	2	$\mathfrak{M}_{168}(0, 0, 2 : 2)$	2^2
$\mathfrak{M}_{168}(0, 1, 2 : 1)$	2	$\mathfrak{M}_{168}(0, 1, 2 : 2)$	2^2
		$\mathfrak{M}_{168}(1, 0, 2)$	S_3
$\mathfrak{M}_{177}(0, 1, 4)$	2	$\mathfrak{M}_{177}(1, 1, 4)$	2^2
$\mathfrak{M}_{177}(0, 0, 4)$	Q_8	$\mathfrak{M}_{177}(0, 0, 6)$	1
$\mathfrak{M}_{177}(0, 0, 8_1)$	1	$\mathfrak{M}_{177}(1, 0, 8_1)$	1
$\mathfrak{M}_{177}(1, 1, 8_1 : 1)$	1	$\mathfrak{M}_{177}(1, 1, 8_1 : 2)$	2
$\mathfrak{M}_{177}(1, 1, 8_2)$	4		
$\mathfrak{M}_{178}(0, 0, 6_1)$	2	$\mathfrak{M}_{178}(0, 1, 6_1)$	2
$\mathfrak{M}_{178}(0, 0, 6_2)$	1	$\mathfrak{M}_{178}(0, 1, 6_2)$	1
$\mathfrak{M}_{178}(0, 0, 8)$	1	$\mathfrak{M}_{178}(0, 1, 8)$	2
$\mathfrak{M}_{178}(0, 1, 4)$	1	$\mathfrak{M}_{178}(0, 0, 4)$	2
$\mathfrak{M}_{188}(1, 0, 3)$	2	$\mathfrak{M}_{188}(0, 0, 3)$	2^2
$\mathfrak{M}_{188}(1, 1, 3)$	2^2	$\mathfrak{M}_{188}(0, 0, 5_1)$	1
$\mathfrak{M}_{188}(1, 0, 5_1)$	1	$\mathfrak{M}_{188}(0, 1, 5_1)$	1
$\mathfrak{M}_{188}(1, 1, 5_1)$	1	$\mathfrak{M}_{188}(0, 0, 5_2)$	2
$\mathfrak{M}_{188}(1, 0, 5_2)$	2	$\mathfrak{M}_{188}(1, 1, 5_2)$	2
$\mathfrak{M}_{188}(0, 0, 7_1 : 1)$	1	$\mathfrak{M}_{188}(0, 0, 7_1 : 2)$	2
$\mathfrak{M}_{188}(1, 1, 7_1 : 1)$	1	$\mathfrak{M}_{188}(1, 1, 7_1 : 2)$	2
$\mathfrak{M}_{188}(1, 0, 7_1)$	2	$\mathfrak{M}_{188}(1, 1, 7_2)$	2
$\mathfrak{M}_{188}(0, 0, 7_2)$	2	$\mathfrak{M}_{188}(1, 0, 7_2)$	3
* * * * * * * * *	* * * *	* * * * * * * * *	* * * *
$\mathfrak{M}_{222}(0, 2, 2)$	D_8	$\mathfrak{M}_{222}(0, 0, 2)$	S_4
$\mathfrak{M}_{222}(2, 2, 2 : 1)$	3	$\mathfrak{M}_{222}(2, 2, 2 : 2)$	$2^2 2$
$\mathfrak{M}_{223}(0, 3, 1)$	S_3	$\mathfrak{M}_{223}(0, 1, 1)$	D_{10}
$\mathfrak{M}_{223}(0, 3, 3)$	$3^2 2$	$\mathfrak{M}_{223}(2, 3, 1 : 1)$	2
$\mathfrak{M}_{223}(2, 3, 1 : 2)$	S_3	$\mathfrak{M}_{223}(2, 3, 3 : 1)$	S_3
$\mathfrak{M}_{223}(2, 3, 3 : 2)$	2^2	$\mathfrak{M}_{223}(2, 1, 1)$	2^2
$\mathfrak{M}_{225}(0, 2, 2)$	2	$\mathfrak{M}_{225}(0, 4, 2)$	D_8
$\mathfrak{M}_{225}(0, 0, 4)$	S_4	$\mathfrak{M}_{225}(2, 2, 2 : 1)$	1
$\mathfrak{M}_{225}(2, 2, 2 : 2)$	2	$\mathfrak{M}_{225}(2, 2, 4)$	3
$\mathfrak{M}_{225}(2, 2, 0)$	2^2	$\mathfrak{M}_{225}(2, 4, 4)$	2^3
$\mathfrak{M}_{225}(2, 0, 0)$	$2^4 2$		
$\mathfrak{M}_{226}(0, 0, 1)$	S_3	$\mathfrak{M}_{226}(0, 0, 0)$	D_8
$\mathfrak{M}_{226}(0, 0, 2)$	S_4	$\mathfrak{M}_{226}(2, 1, 0)$	2
$\mathfrak{M}_{226}(2, 0, 0 : 1)$	2	$\mathfrak{M}_{226}(2, 0, 0 : 2)$	2^3
$\mathfrak{M}_{226}(2, 1, 2)$	A_4	$\mathfrak{M}_{226}(2, 0, 2)$	$2 \times D_8$
$\mathfrak{M}_{227}(2, 4, 4 : 1)$	2^2	$\mathfrak{M}_{227}(2, 4, 4 : 2)$	1
$\mathfrak{M}_{227}(2, 4, 2)$	1	$\mathfrak{M}_{227}(2, 6, 4)$	D_8

$\mathfrak{M}_{227}(0, 4, 2)$	2	$\mathfrak{M}_{227}(0, 4, 4)$	2
$\mathfrak{M}_{228}(0, 3, 3)$	2	$\mathfrak{M}_{228}(0, 3, 5)$	S_3
$\mathfrak{M}_{228}(0, 3, 1)$	S_3	$\mathfrak{M}_{228}(0, 1, 5)$	D_{10}
$\mathfrak{M}_{228}(2, 3, 3 : 1)$	1	$\mathfrak{M}_{228}(2, 3, 3 : 2)$	2
$\mathfrak{M}_{228}(2, 3, 3 : 3)$	2^2	$\mathfrak{M}_{228}(2, 3, 5 : 1)$	2
$\mathfrak{M}_{228}(2, 3, 5 : 2)$	2^2	$\mathfrak{M}_{228}(2, 1, 3 : 1)$	2
$\mathfrak{M}_{228}(2, 1, 3 : 2)$	2^2	$\mathfrak{M}_{228}(2, 5, 5)$	S_3
$\mathfrak{M}_{228}(2, 1, 1)$	S_3	$\mathfrak{M}_{228}(2, 5, 1)$	A_4
$\mathfrak{M}_{233}(3, 1, 1)$	2	$\mathfrak{M}_{233}(3, 3, 3 : 1)$	2
$\mathfrak{M}_{233}(3, 3, 3 : 2)$	2^2	$\mathfrak{M}_{233}(3, 3, 1)$	4
$\mathfrak{M}_{233}(3, 1, 3)$	S_3	$\mathfrak{M}_{233}(1, 1, 1)$	2
$\mathfrak{M}_{233}(1, 1, 3 : 1)$	3	$\mathfrak{M}_{233}(1, 1, 3 : 2)$	2
$\mathfrak{M}_{234}(3, 1, 2)$	2	$\mathfrak{M}_{234}(3, 3, 2 : 1)$	2
$\mathfrak{M}_{234}(3, 3, 2 : 2)$	4	$\mathfrak{M}_{234}(3, 3, 4)$	2^2
$\mathfrak{M}_{234}(3, 1, 0)$	S_3	$\mathfrak{M}_{234}(3, 1, 4)$	S_3
$\mathfrak{M}_{234}(1, 1, 2)$	1	$\mathfrak{M}_{234}(1, 1, 4)$	2^2
$\mathfrak{M}_{235}(3, 2, 2 : 1)$	1	$\mathfrak{M}_{235}(3, 2, 2 : 2)$	2
$\mathfrak{M}_{235}(3, 2, 4)$	2	$\mathfrak{M}_{235}(3, 4, 4 : 1)$	2^2
$\mathfrak{M}_{235}(3, 4, 4 : 2)$	S_3	$\mathfrak{M}_{235}(3, 4, 2)$	2^2
$\mathfrak{M}_{235}(3, 0, 2)$	2^2	$\mathfrak{M}_{235}(3, 2, 0)$	S_3
$\mathfrak{M}_{235}(3, 0, 0)$	S_4	$\mathfrak{M}_{235}(1, 2, 2)$	1
$\mathfrak{M}_{235}(1, 4, 2 : 1)$	1	$\mathfrak{M}_{235}(1, 4, 2 : 2)$	2^2
$\mathfrak{M}_{235}(1, 2, 4)$	2	$\mathfrak{M}_{235}(1, 0, 4)$	2^2
$\mathfrak{M}_{235}(1, 0, 2)$	2^2	$\mathfrak{M}_{235}(1, 2, 0)$	S_3
$\mathfrak{M}_{235}(1, 4, 4)$	S_3	$\mathfrak{M}_{235}(1, 4, 0)$	A_4
$\mathfrak{M}_{236}(3, 0, 1)$	2	$\mathfrak{M}_{236}(3, 0, 0 : 1)$	2
$\mathfrak{M}_{236}(3, 0, 0 : 2)$	2^2	$\mathfrak{M}_{236}(3, 0, 0 : 3)$	S_3
$\mathfrak{M}_{236}(3, 1, 2)$	S_3	$\mathfrak{M}_{236}(3, 2, 1)$	D_8
$\mathfrak{M}_{236}(3, 0, 2)$	D_{12}	$\mathfrak{M}_{236}(3, 2, 2)$	S_4
$\mathfrak{M}_{236}(1, 0, 1)$	2	$\mathfrak{M}_{236}(1, 0, 0 : 1)$	2
$\mathfrak{M}_{236}(1, 0, 0 : 2)$	2^2	$\mathfrak{M}_{236}(1, 1, 0 : 1)$	2
$\mathfrak{M}_{236}(1, 1, 0 : 2)$	3	$\mathfrak{M}_{236}(1, 0, 2)$	2^2
$\mathfrak{M}_{237}(3, 4, 4 : 1)$	1	$\mathfrak{M}_{237}(3, 4, 4 : 2)$	2
$\mathfrak{M}_{237}(3, 4, 2 : 1)$	2	$\mathfrak{M}_{237}(3, 4, 2 : 2)$	4
$\mathfrak{M}_{237}(3, 2, 2)$	2	$\mathfrak{M}_{237}(3, 6, 6)$	$3^2 2$
$\mathfrak{M}_{237}(1, 4, 2 : 1)$	1	$\mathfrak{M}_{237}(1, 4, 2 : 2)$	2
$\mathfrak{M}_{237}(1, 4, 4 : 1)$	1	$\mathfrak{M}_{237}(1, 4, 4 : 2)$	2
$\mathfrak{M}_{237}(1, 4, 6)$	2	$\mathfrak{M}_{237}(1, 2, 6)$	2
$\mathfrak{M}_{237}(1, 2, 2)$	2	$\mathfrak{M}_{237}(1, 6, 2)$	D_{10}

$\mathfrak{M}_{238}(3, 3, 4 : 1)$	1	$\mathfrak{M}_{238}(3, 3, 4 : 2)$	2
$\mathfrak{M}_{238}(3, 3, 2 : 1)$	1	$\mathfrak{M}_{238}(3, 3, 2 : 2)$	2
$\mathfrak{M}_{238}(3, 3, 2 : 3)$	2^2	$\mathfrak{M}_{238}(3, 1, 2 : 1)$	2
$\mathfrak{M}_{238}(3, 1, 2 : 2)$	S_3	$\mathfrak{M}_{238}(3, 1, 4)$	2
$\mathfrak{M}_{238}(3, 3, 6)$	2^2	$\mathfrak{M}_{238}(3, 5, 6)$	S_3
$\mathfrak{M}_{238}(1, 1, 4)$	1	$\mathfrak{M}_{238}(1, 3, 2 : 1)$	1
$\mathfrak{M}_{238}(1, 3, 2 : 2)$	2	$\mathfrak{M}_{238}(1, 3, 4 : 1)$	1
$\mathfrak{M}_{238}(1, 3, 4 : 2)$	2	$\mathfrak{M}_{238}(1, 5, 2)$	2
$\mathfrak{M}_{238}(1, 3, 6)$	2	$\mathfrak{M}_{238}(1, 5, 4)$	2
$\mathfrak{M}_{238}(1, 1, 2)$	2^2		
$\mathfrak{M}_{255}(2, 2, 4_1 : 1)$	1	$\mathfrak{M}_{255}(2, 2, 4_1 : 2)$	2
$\mathfrak{M}_{255}(2, 2, 2)$	1	$\mathfrak{M}_{255}(0, 2, 4_1)$	2
$\mathfrak{M}_{255}(2, 4, 4_1)$	2	$\mathfrak{M}_{255}(0, 2, 2)$	2
$\mathfrak{M}_{255}(4, 4, 4_1)$	3	$\mathfrak{M}_{255}(2, 2, 0)$	2^2
$\mathfrak{M}_{255}(2, 2, 4_2)$	2^2	$\mathfrak{M}_{255}(2, 4, 4_2)$	2^2
$\mathfrak{M}_{255}(4, 0, 2)$	2^2	$\mathfrak{M}_{255}(4, 4, 4_2)$	2^3
$\mathfrak{M}_{255}(0, 0, 4_2)$	2^4	$\mathfrak{M}_{255}(4, 0, 0)$	$2^4 2$
$\mathfrak{M}_{256}(0, 0, 1)$	3	$\mathfrak{M}_{256}(0, 1, 0_2)$	2^2
$\mathfrak{M}_{256}(0, 0, 2)$	2^3	$\mathfrak{M}_{256}(0, 0, 0_2)$	2^3
$\mathfrak{M}_{256}(0, 2, 0_1)$	$2^4 2^2$	$\mathfrak{M}_{256}(2, 0, 1 : 1)$	1
$\mathfrak{M}_{256}(2, 0, 1 : 2)$	2	$\mathfrak{M}_{256}(2, 1, 0_2)$	2
$\mathfrak{M}_{256}(2, 1, 2)$	2	$\mathfrak{M}_{256}(2, 0, 2)$	2
$\mathfrak{M}_{256}(2, 2, 1)$	3	$\mathfrak{M}_{256}(2, 2, 0_2)$	2^2
$\mathfrak{M}_{256}(2, 1, 0_1)$	S_3	$\mathfrak{M}_{256}(2, 0, 0_1)$	D_8
$\mathfrak{M}_{256}(4, 0, 1)$	2	$\mathfrak{M}_{256}(4, 1, 0_1)$	2^2
$\mathfrak{M}_{256}(4, 1, 2)$	S_3	$\mathfrak{M}_{256}(4, 2, 2)$	$2^2 2^2$
$\mathfrak{M}_{257}(0, 4, 4_2)$	1	$\mathfrak{M}_{257}(0, 2, 4_2)$	2
$\mathfrak{M}_{257}(0, 4, 6)$	2^2	$\mathfrak{M}_{257}(0, 4, 2)$	2^2
$\mathfrak{M}_{257}(2, 4, 2)$	1	$\mathfrak{M}_{257}(2, 4, 4_2)$	1
$\mathfrak{M}_{257}(2, 4, 6 : 1)$	1	$\mathfrak{M}_{257}(2, 4, 6 : 2)$	2
$\mathfrak{M}_{257}(2, 4, 4_1 : 1)$	1	$\mathfrak{M}_{257}(2, 4, 4_1 : 2)$	2
$\mathfrak{M}_{257}(2, 2, 4_2 : 1)$	1	$\mathfrak{M}_{257}(2, 2, 4_2 : 2)$	2
$\mathfrak{M}_{257}(2, 6, 4_2)$	2	$\mathfrak{M}_{257}(4, 2, 4_2)$	1
$\mathfrak{M}_{257}(4, 4, 4_2)$	1	$\mathfrak{M}_{257}(4, 4, 6)$	1
$\mathfrak{M}_{257}(4, 4, 4_1)$	3	$\mathfrak{M}_{257}(4, 4, 2)$	D_8
$\mathfrak{M}_{258}(0, 3, 4_2 : 1)$	3	$\mathfrak{M}_{258}(0, 3, 4_2 : 2)$	2^2
$\mathfrak{M}_{258}(0, 1, 6)$	2^2	$\mathfrak{M}_{258}(0, 5, 2)$	2^2
$\mathfrak{M}_{258}(0, 3, 2)$	2^2	$\mathfrak{M}_{258}(0, 3, 6)$	2^2
$\mathfrak{M}_{258}(2, 3, 2 : 1)$	1	$\mathfrak{M}_{258}(2, 3, 2 : 2)$	2

$\mathfrak{M}_{258}(2, 3, 4_1)$	1	$\mathfrak{M}_{258}(2, 5, 4_1)$	1
$\mathfrak{M}_{258}(2, 1, 4_1)$	1	$\mathfrak{M}_{258}(2, 3, 4_2 : 1)$	1
$\mathfrak{M}_{258}(2, 3, 4_2 : 2)$	2	$\mathfrak{M}_{258}(2, 3, 6 : 1)$	1
$\mathfrak{M}_{258}(2, 3, 6 : 2)$	2	$\mathfrak{M}_{258}(2, 1, 4_2 : 1)$	2
$\mathfrak{M}_{258}(2, 1, 4_2 : 2)$	2	$\mathfrak{M}_{258}(2, 5, 4_2 : 1)$	2
$\mathfrak{M}_{258}(2, 5, 4_2 : 2)$	3	$\mathfrak{M}_{258}(2, 5, 2)$	2
$\mathfrak{M}_{258}(2, 1, 6)$	2	$\mathfrak{M}_{258}(2, 5, 6 : 1)$	2
$\mathfrak{M}_{258}(2, 5, 6 : 2)$	2	$\mathfrak{M}_{258}(2, 1, 2)$	2
$\mathfrak{M}_{258}(4, 3, 4_1 : 1)$	1	$\mathfrak{M}_{258}(4, 3, 4_1 : 2)$	2
$\mathfrak{M}_{258}(4, 3, 4_2)$	1	$\mathfrak{M}_{258}(4, 1, 4_1)$	2
$\mathfrak{M}_{258}(4, 5, 4_1)$	2	$\mathfrak{M}_{258}(4, 3, 6 : 1)$	2
$\mathfrak{M}_{258}(4, 3, 6 : 2)$	2^2	$\mathfrak{M}_{258}(4, 3, 2 : 1)$	2
$\mathfrak{M}_{258}(4, 3, 2 : 2)$	2^2	$\mathfrak{M}_{258}(4, 5, 6)$	2^2
$\mathfrak{M}_{258}(4, 1, 2)$	S_3		
$\mathfrak{M}_{266}(1, 1, 0_1)$	1	$\mathfrak{M}_{266}(0, 0, 0_1)$	1
$\mathfrak{M}_{266}(0, 1, 0_2)$	2	$\mathfrak{M}_{266}(0, 0, 1)$	3
$\mathfrak{M}_{266}(1, 1, 0_2)$	2^2	$\mathfrak{M}_{266}(2, 0, 0_1)$	2^2
$\mathfrak{M}_{266}(1, 0, 0_2)$	2^2	$\mathfrak{M}_{266}(0, 0, 1)$	2^2
$\mathfrak{M}_{266}(1, 2, 0_1)$	2^2	$\mathfrak{M}_{266}(2, 0, 0_2)$	$2 \times D_8$
$\mathfrak{M}_{266}(2, 0, 0_1)$	2^2		
$\mathfrak{M}_{267}(0, 4, 0 : 1)$	1	$\mathfrak{M}_{267}(0, 4, 0 : 2)$	2
$\mathfrak{M}_{267}(0, 4, 1)$	1	$\mathfrak{M}_{267}(0, 4, 2_1)$	1
$\mathfrak{M}_{267}(0, 2, 2_1)$	2	$\mathfrak{M}_{267}(0, 2, 0 : 1)$	2
$\mathfrak{M}_{267}(0, 2, 0 : 2)$	D_8	$\mathfrak{M}_{267}(0, 6, 0)$	D_8
$\mathfrak{M}_{267}(0, 4, 2_2)$	2	$\mathfrak{M}_{267}(1, 2, 0)$	1
$\mathfrak{M}_{267}(1, 4, 2_2)$	1	$\mathfrak{M}_{267}(1, 4, 0)$	1
$\mathfrak{M}_{267}(1, 4, 2_1)$	2	$\mathfrak{M}_{267}(1, 2, 2_1)$	2
$\mathfrak{M}_{267}(1, 6, 2_1)$	D_{10}	$\mathfrak{M}_{267}(2, 4, 1)$	2
$\mathfrak{M}_{267}(2, 2, 0)$	2^2	$\mathfrak{M}_{267}(2, 4, 2_1)$	4
$\mathfrak{M}_{267}(2, 4, 2_2)$	D_8		
$\mathfrak{M}_{268}(0, 3, 2)$	1	$\mathfrak{M}_{268}(0, 3, 0)$	1
$\mathfrak{M}_{268}(0, 5, 1_1)$	2	$\mathfrak{M}_{268}(0, 1, 1_1)$	2
$\mathfrak{M}_{268}(0, 1, 2)$	2	$\mathfrak{M}_{268}(0, 5, 0 : 1)$	2
$\mathfrak{M}_{268}(0, 5, 0 : 2)$	2^2	$\mathfrak{M}_{268}(0, 3, 1_1)$	2
$\mathfrak{M}_{268}(0, 5, 2)$	2^2	$\mathfrak{M}_{268}(0, 1, 0)$	2^2
$\mathfrak{M}_{268}(1, 3, 0 : 1)$	1	$\mathfrak{M}_{268}(1, 3, 0 : 2)$	2
$\mathfrak{M}_{268}(1, 3, 2 : 1)$	1	$\mathfrak{M}_{268}(1, 3, 2 : 2)$	2
$\mathfrak{M}_{268}(1, 5, 2)$	2	$\mathfrak{M}_{268}(1, 1, 0)$	2
$\mathfrak{M}_{268}(2, 3, 1_1)$	2	$\mathfrak{M}_{268}(2, 3, 0)$	2^2

$\mathfrak{M}_{268}(2, 3, 2)$	2^2	$\mathfrak{M}_{268}(2, 3, 1_2)$	2^2
$\mathfrak{M}_{268}(2, 5, 2)$	S_3	$\mathfrak{M}_{268}(2, 1, 0)$	S_3
$\mathfrak{M}_{277}(4, 4, 8_2)$	1	$\mathfrak{M}_{277}(2, 2, 8_1 : 1)$	1
$\mathfrak{M}_{277}(2, 2, 8_1 : 2)$	2	$\mathfrak{M}_{277}(4, 2, 8_1 : 1)$	1
$\mathfrak{M}_{277}(4, 2, 8_1 : 2)$	2	$\mathfrak{M}_{277}(4, 4, 8_1)$	1
$\mathfrak{M}_{277}(2, 4, 4)$	1	$\mathfrak{M}_{277}(4, 4, 6)$	1
$\mathfrak{M}_{277}(4, 4, 4)$	1	$\mathfrak{M}_{277}(4, 6, 8_1)$	2
$\mathfrak{M}_{277}(2, 2, 8_1)$	2	$\mathfrak{M}_{277}(2, 2, 4)$	2^2
$\mathfrak{M}_{277}(2, 6, 4)$	D_8		
$\mathfrak{M}_{278}(4, 1, 4 : 1)$	1	$\mathfrak{M}_{278}(4, 1, 4 : 2)$	2
$\mathfrak{M}_{278}(4, 3, 4)$	1	$\mathfrak{M}_{278}(4, 1, 6_2)$	1
$\mathfrak{M}_{278}(4, 3, 6_2)$	1	$\mathfrak{M}_{278}(4, 3, 6_1)$	1
$\mathfrak{M}_{278}(4, 3, 8 : 1)$	1	$\mathfrak{M}_{278}(4, 3, 8 : 2)$	2
$\mathfrak{M}_{278}(4, 5, 6_2)$	1	$\mathfrak{M}_{278}(4, 5, 8 : 1)$	1
$\mathfrak{M}_{278}(4, 5, 8 : 2)$	2	$\mathfrak{M}_{278}(4, 1, 8)$	2
$\mathfrak{M}_{278}(4, 1, 6_1)$	2	$\mathfrak{M}_{278}(4, 5, 4)$	2
$\mathfrak{M}_{278}(4, 5, 6_1)$	2	$\mathfrak{M}_{278}(4, 3, 4)$	2
$\mathfrak{M}_{288}(3, 5, 5_1)$	1	$\mathfrak{M}_{288}(3, 3, 5_1)$	1
$\mathfrak{M}_{288}(5, 1, 5_1)$	1	$\mathfrak{M}_{288}(3, 3, 3)$	1
$\mathfrak{M}_{288}(1, 3, 5_1)$	1	$\mathfrak{M}_{288}(3, 3, 5_2)$	1
$\mathfrak{M}_{288}(3, 3, 7_1)$	1	$\mathfrak{M}_{288}(3, 5, 7_1 : 1)$	1
$\mathfrak{M}_{288}(3, 5, 7_1 : 2)$	2	$\mathfrak{M}_{288}(3, 3, 7_2)$	1
$\mathfrak{M}_{288}(3, 5, 7_2)$	2	$\mathfrak{M}_{288}(5, 5, 7_1)$	2
$\mathfrak{M}_{288}(1, 3, 7_1 : 1)$	1	$\mathfrak{M}_{288}(1, 3, 7_1 : 2)$	2
$\mathfrak{M}_{288}(1, 3, 5_2)$	2	$\mathfrak{M}_{288}(5, 3, 5_2)$	2
$\mathfrak{M}_{288}(3, 5, 3)$	2	$\mathfrak{M}_{288}(3, 1, 3)$	2
$\mathfrak{M}_{288}(1, 3, 7_2)$	2	$\mathfrak{M}_{288}(5, 5, 7_2)$	3
$\mathfrak{M}_{288}(1, 1, 7_2)$	3	$\mathfrak{M}_{288}(1, 5, 3)$	2^2
* * * * * * * * * *	* * * *	* * * * * * * * * *	* * * *
$\mathfrak{M}_{333}(1, 1, 3 : 1)$	1	$\mathfrak{M}_{333}(1, 1, 3 : 2)$	S_3
$\mathfrak{M}_{333}(1, 1, 1)$	2	$\mathfrak{M}_{333}(3, 1, 3)$	2
$\mathfrak{M}_{333}(3, 3, 3 : 1)$	1	$\mathfrak{M}_{333}(3, 3, 3 : 2)$	2
$\mathfrak{M}_{334}(3, 2, 2 : 1)$	1	$\mathfrak{M}_{334}(3, 2, 2 : 2)$	2
$\mathfrak{M}_{334}(1, 2, 2 : 1)$	1	$\mathfrak{M}_{334}(1, 2, 2 : 2)$	2
$\mathfrak{M}_{334}(3, 2, 4)$	2	$\mathfrak{M}_{334}(1, 2, 4 : 1)$	2
$\mathfrak{M}_{334}(1, 2, 4 : 2)$	4	$\mathfrak{M}_{334}(3, 2, 0)$	2
$\mathfrak{M}_{334}(1, 2, 0)$	4	$\mathfrak{M}_{334}(3, 4, 4 : 1)$	2^2
$\mathfrak{M}_{334}(3, 4, 4 : 2)$	S_3	$\mathfrak{M}_{334}(1, 4, 0)$	S_3
$\mathfrak{M}_{334}(3, 0, 0)$	A_4	$\mathfrak{M}_{334}(1, 4, 4)$	$3^2 2$

$\mathfrak{M}_{335}(1, 2, 2)$	1	$\mathfrak{M}_{335}(1, 2, 4 : 1)$	1
$\mathfrak{M}_{335}(1, 2, 4, : 2)$	2	$\mathfrak{M}_{335}(3, 4, 2 : 1)$	1
$\mathfrak{M}_{335}(3, 4, 2 : 2)$	2	$\mathfrak{M}_{335}(3, 4, 4 : 1)$	1
$\mathfrak{M}_{335}(3, 4, 4 : 2)$	2	$\mathfrak{M}_{335}(3, 0, 2)$	2
$\mathfrak{M}_{335}(1, 4, 4)$	2		
$\mathfrak{M}_{335}(1, 2, 0)$	S_3	$\mathfrak{M}_{335}(3, 2, 2)$	1
$\mathfrak{M}_{335}(1, 0, 4)$	4		
$\mathfrak{M}_{336}(3, 0, 1 : 1)$	1	$\mathfrak{M}_{336}(3, 0, 1 : 2)$	2
$\mathfrak{M}_{336}(1, 1, 0 : 1)$	1	$\mathfrak{M}_{336}(1, 1, 0 : 2)$	2
$\mathfrak{M}_{336}(1, 0, 0)$	2	$\mathfrak{M}_{336}(3, 0, 0)$	1
$\mathfrak{M}_{336}(3, 2, 1)$	2	$\mathfrak{M}_{336}(3, 2, 0)$	2^2
$\mathfrak{M}_{336}(1, 2, 0 : 1)$	4	$\mathfrak{M}_{336}(1, 2, 0 : 2)$	S_3
$\mathfrak{M}_{336}(3, 2, 2)$	D_8		
$\mathfrak{M}_{337}(3, 4, 2 : 1)$	1	$\mathfrak{M}_{337}(3, 4, 2 : 2)$	2
$\mathfrak{M}_{337}(3, 6, 4 : 1)$	1	$\mathfrak{M}_{337}(3, 6, 4 : 2)$	2
$\mathfrak{M}_{337}(3, 2, 2 : 1)$	1	$\mathfrak{M}_{337}(3, 2, 2 : 2)$	2
$\mathfrak{M}_{337}(1, 4, 2 : 1)$	1	$\mathfrak{M}_{337}(1, 4, 2 : 2)$	2
$\mathfrak{M}_{337}(1, 6, 2)$	2	$\mathfrak{M}_{337}(3, 6, 6)$	2
$\mathfrak{M}_{337}(1, 6, 4)$	1	$\mathfrak{M}_{337}(3, 6, 2)$	4
$\mathfrak{M}_{337}(1, 2, 2)$	4		
$\mathfrak{M}_{338}(3, 2, 4 : 1)$	1	$\mathfrak{M}_{338}(3, 2, 4 : 2)$	2
$\mathfrak{M}_{338}(1, 4, 4)$	1	$\mathfrak{M}_{338}(3, 4, 4)$	1
$\mathfrak{M}_{338}(3, 2, 2 : 1)$	1	$\mathfrak{M}_{338}(3, 2, 2 : 2)$	2
$\mathfrak{M}_{338}(1, 2, 4 : 1)$	1	$\mathfrak{M}_{338}(1, 2, 4 : 2)$	2
$\mathfrak{M}_{338}(1, 2, 2)$	2	$\mathfrak{M}_{338}(1, 6, 4)$	2
$\mathfrak{M}_{338}(3, 4, 6)$	2	$\mathfrak{M}_{338}(1, 2, 6)$	2
$\mathfrak{M}_{338}(3, 6, 2)$	2^2	$\mathfrak{M}_{338}(3, 6, 6)$	S_3
$\mathfrak{M}_{345}(2, 2, 2)$	1	$\mathfrak{M}_{345}(2, 2, 4 : 1)$	1
$\mathfrak{M}_{345}(2, 2, 4 : 2)$	2	$\mathfrak{M}_{345}(2, 4, 4 : 1)$	1
$\mathfrak{M}_{345}(2, 4, 4 : 2)$	2	$\mathfrak{M}_{345}(4, 2, 2)$	1
$\mathfrak{M}_{345}(4, 4, 4)$	2	$\mathfrak{M}_{345}(0, 4, 2)$	2
$\mathfrak{M}_{345}(0, 2, 2)$	2	$\mathfrak{M}_{345}(4, 2, 4)$	2
$\mathfrak{M}_{345}(2, 4, 0)$	4	$\mathfrak{M}_{345}(4, 0, 2)$	S_3
$\mathfrak{M}_{345}(0, 0, 4)$	A_4	$\mathfrak{M}_{345}(4, 0, 0)$	S_4
$\mathfrak{M}_{346}(4, 0, 0)$	2	$\mathfrak{M}_{346}(4, 1, 2)$	S_3
$\mathfrak{M}_{346}(4, 2, 2)$	D_{12}	$\mathfrak{M}_{346}(0, 0, 1)$	2
$\mathfrak{M}_{346}(0, 0, 0)$	S_3	$\mathfrak{M}_{346}(0, 2, 0)$	D_8
$\mathfrak{M}_{346}(2, 0, 0 : 1)$	1	$\mathfrak{M}_{346}(2, 0, 0 : 2)$	2

$\mathfrak{M}_{346}(2, 1, 0 : 1)$	1	$\mathfrak{M}_{346}(2, 1, 0 : 2)$	2
$\mathfrak{M}_{346}(2, 2, 1)$	2	$\mathfrak{M}_{346}(2, 2, 0)$	2
$\mathfrak{M}_{347}(4, 2, 4)$	2	$\mathfrak{M}_{347}(4, 6, 4)$	2
$\mathfrak{M}_{347}(4, 2, 2 : 1)$	2	$\mathfrak{M}_{347}(4, 2, 2 : 2)$	4
$\mathfrak{M}_{347}(4, 6, 6)$	4	$\mathfrak{M}_{347}(0, 2, 4)$	2
$\mathfrak{M}_{347}(0, 2, 6)$	4	$\mathfrak{M}_{347}(2, 6, 4 : 1)$	1
$\mathfrak{M}_{347}(2, 6, 4 : 2)$	2	$\mathfrak{M}_{347}(2, 2, 4 : 1)$	1
$\mathfrak{M}_{347}(2, 2, 4 : 2)$	2	$\mathfrak{M}_{347}(2, 2, 2)$	1
$\mathfrak{M}_{347}(2, 6, 2)$	2	$\mathfrak{M}_{347}(2, 6, 6)$	4
$\mathfrak{M}_{348}(4, 4, 5 : 1)$	1	$\mathfrak{M}_{348}(4, 4, 5 : 2)$	2
$\mathfrak{M}_{348}(4, 2, 3 : 1)$	1	$\mathfrak{M}_{348}(4, 2, 3 : 2)$	2
$\mathfrak{M}_{348}(4, 4, 3 : 1)$	1	$\mathfrak{M}_{348}(4, 4, 3 : 2)$	2
$\mathfrak{M}_{348}(4, 2, 5)$	2^2	$\mathfrak{M}_{348}(4, 6, 5 : 1)$	2^2
$\mathfrak{M}_{348}(4, 6, 5 : 2)$	S_3	$\mathfrak{M}_{348}(4, 2, 1 : 1)$	2^2
$\mathfrak{M}_{348}(4, 2, 1 : 2)$	S_3	$\mathfrak{M}_{348}(0, 4, 3)$	1
$\mathfrak{M}_{348}(0, 2, 3)$	2	$\mathfrak{M}_{348}(0, 2, 5 : 1)$	2
$\mathfrak{M}_{348}(0, 2, 5 : 2)$	2^2	$\mathfrak{M}_{348}(0, 4, 5)$	2
$\mathfrak{M}_{348}(0, 6, 1)$	A_4	$\mathfrak{M}_{348}(2, 4, 5 : 1)$	1
$\mathfrak{M}_{348}(2, 4, 5 : 2)$	2	$\mathfrak{M}_{348}(2, 4, 3 : 1)$	1
$\mathfrak{M}_{348}(2, 4, 3 : 2)$	2	$\mathfrak{M}_{348}(2, 6, 3 : 1)$	1
$\mathfrak{M}_{348}(2, 6, 3 : 2)$	2	$\mathfrak{M}_{348}(2, 2, 3 : 1)$	1
$\mathfrak{M}_{348}(2, 2, 3 : 2)$	2	$\mathfrak{M}_{348}(2, 4, 1 : 1)$	1
$\mathfrak{M}_{348}(2, 4, 1 : 2)$	2	$\mathfrak{M}_{348}(2, 2, 1)$	2
$\mathfrak{M}_{348}(2, 6, 5)$	2		
$\mathfrak{M}_{355}(4, 4, 4_1)$	1	$\mathfrak{M}_{355}(2, 2, 4_1 : 1)$	1
$\mathfrak{M}_{355}(2, 2, 4_1 : 2)$	2	$\mathfrak{M}_{355}(2, 2, 4_2)$	1
$\mathfrak{M}_{355}(2, 4, 4_1)$	1	$\mathfrak{M}_{355}(2, 2, 2 : 1)$	1
$\mathfrak{M}_{355}(2, 2, 2 : 2)$	2	$\mathfrak{M}_{355}(2, 4, 2)$	1
$\mathfrak{M}_{355}(2, 4, 4_2)$	2	$\mathfrak{M}_{355}(0, 2, 2)$	2
$\mathfrak{M}_{355}(0, 2, 4_1)$	2	$\mathfrak{M}_{355}(0, 4, 2)$	2
$\mathfrak{M}_{355}(4, 4, 2)$	2	$\mathfrak{M}_{355}(4, 4, 4_2)$	2
$\mathfrak{M}_{355}(0, 2, 4_2)$	2^2	$\mathfrak{M}_{355}(4, 2, 0)$	2^2
$\mathfrak{M}_{356}(4, 1, 0_2)$	1	$\mathfrak{M}_{356}(4, 0, 0_2)$	1
$\mathfrak{M}_{356}(4, 0, 1)$	1	$\mathfrak{M}_{356}(4, 2, 1)$	1
$\mathfrak{M}_{356}(4, 1, 2)$	2	$\mathfrak{M}_{356}(4, 0, 2)$	2^2
$\mathfrak{M}_{356}(4, 2, 2)$	2^2	$\mathfrak{M}_{356}(4, 0, 0_1)$	S_3
$\mathfrak{M}_{356}(4, 2, 0_1)$	D_8	$\mathfrak{M}_{356}(2, 0, 1)$	1
$\mathfrak{M}_{356}(2, 0, 0_2 : 1)$	1	$\mathfrak{M}_{356}(2, 0, 0_2 : 2)$	2

$\mathfrak{M}_{356}(2, 1, 0_2)$	1	$\mathfrak{M}_{356}(2, 1, 2)$	2
$\mathfrak{M}_{356}(2, 1, 0_1 : 1)$	2	$\mathfrak{M}_{356}(2, 1, 0_1 : 2)$	2^2
$\mathfrak{M}_{356}(2, 0, 2)$	2	$\mathfrak{M}_{356}(2, 2, 0_2)$	2
$\mathfrak{M}_{356}(2, 2, 1)$	2	$\mathfrak{M}_{356}(2, 0, 0_1)$	2^2
$\mathfrak{M}_{356}(0, 0, 1)$	3	$\mathfrak{M}_{356}(0, 0, 2)$	S_3
$\mathfrak{M}_{356}(0, 2, 0_2)$	D_8		
$\mathfrak{M}_{357}(2, 2, 6 : 1)$	1	$\mathfrak{M}_{357}(2, 2, 6 : 2)$	2
$\mathfrak{M}_{357}(2, 6, 4_2)$	1	$\mathfrak{M}_{357}(2, 2, 2)$	2
$\mathfrak{M}_{357}(2, 2, 4_1)$	2	$\mathfrak{M}_{357}(2, 6, 6)$	2
$\mathfrak{M}_{357}(2, 6, 2)$	2	$\mathfrak{M}_{357}(2, 6, 4_1)$	2
$\mathfrak{M}_{357}(4, 2, 4_2)$	1	$\mathfrak{M}_{357}(4, 6, 4_2)$	1
$\mathfrak{M}_{357}(4, 2, 2)$	2	$\mathfrak{M}_{357}(4, 2, 4_1)$	2
$\mathfrak{M}_{357}(4, 2, 6)$	2	$\mathfrak{M}_{357}(4, 6, 6)$	2
$\mathfrak{M}_{357}(0, 4, 4_2)$	1	$\mathfrak{M}_{357}(0, 2, 6)$	2
$\mathfrak{M}_{357}(0, 6, 2)$	S_3		
$\mathfrak{M}_{358}(2, 4, 6)$	1	$\mathfrak{M}_{358}(2, 4, 2)$	1
$\mathfrak{M}_{358}(2, 6, 4_1)$	1	$\mathfrak{M}_{358}(2, 2, 4_1)$	1
$\mathfrak{M}_{358}(2, 2, 4_2)$	1	$\mathfrak{M}_{358}(2, 4, 4_1)$	1
$\mathfrak{M}_{358}(2, 4, 4_2)$	1	$\mathfrak{M}_{358}(2, 2, 2)$	1
$\mathfrak{M}_{358}(2, 2, 6)$	1	$\mathfrak{M}_{358}(2, 6, 4_2)$	2
$\mathfrak{M}_{358}(2, 6, 2)$	2	$\mathfrak{M}_{358}(2, 2, 6)$	2
$\mathfrak{M}_{358}(4, 4, 6)$	1	$\mathfrak{M}_{358}(4, 2, 4_1)$	1
$\mathfrak{M}_{358}(4, 2, 4_2 : 1)$	1	$\mathfrak{M}_{358}(4, 2, 4_2 : 2)$	2
$\mathfrak{M}_{358}(4, 4, 4_2)$	1	$\mathfrak{M}_{358}(4, 2, 2 : 1)$	1
$\mathfrak{M}_{358}(4, 2, 2 : 2)$	2	$\mathfrak{M}_{358}(4, 4, 2 : 1)$	1
$\mathfrak{M}_{358}(4, 4, 2 : 2)$	2	$\mathfrak{M}_{358}(4, 4, 4_1)$	1
$\mathfrak{M}_{358}(4, 6, 6)$	2	$\mathfrak{M}_{358}(4, 4, 6)$	2
$\mathfrak{M}_{358}(4, 2, 6)$	2	$\mathfrak{M}_{358}(4, 6, 4_2)$	3
$\mathfrak{M}_{358}(0, 4, 4_1)$	1	$\mathfrak{M}_{358}(0, 2, 4_1)$	2
$\mathfrak{M}_{358}(0, 2, 6)$	2	$\mathfrak{M}_{358}(0, 4, 2)$	2
$\mathfrak{M}_{358}(0, 2, 4_2)$	2^2	$\mathfrak{M}_{358}(0, 6, 2)$	S_3
$\mathfrak{M}_{366}(1, 1, 0_1)$	1	$\mathfrak{M}_{366}(1, 0, 0_1 : 1)$	1
$\mathfrak{M}_{366}(1, 0, 0_1 : 2)$	2	$\mathfrak{M}_{366}(0, 0, 0_1 : 1)$	1
$\mathfrak{M}_{366}(0, 0, 0_1 : 2)$	2	$\mathfrak{M}_{366}(0, 0, 1)$	1
$\mathfrak{M}_{366}(1, 2, 0_1)$	2	$\mathfrak{M}_{366}(2, 0, 0_1)$	2
$\mathfrak{M}_{366}(0, 0, 0_2)$	2	$\mathfrak{M}_{366}(0, 1, 0_2)$	2
$\mathfrak{M}_{366}(2, 1, 0_2)$	D_8	$\mathfrak{M}_{366}(2, 2, 1)$	A_4
$\mathfrak{M}_{367}(1, 4, 0)$	1	$\mathfrak{M}_{367}(1, 2, 0 : 1)$	1

$\mathfrak{M}_{367}(1, 2, 0 : 2)$	4	$\mathfrak{M}_{367}(1, 4, 2_1 : 1)$	1
$\mathfrak{M}_{367}(1, 4, 2_1 : 2)$	2	$\mathfrak{M}_{367}(1, 6, 2_2)$	2
$\mathfrak{M}_{367}(1, 2, 2_1)$	2	$\mathfrak{M}_{367}(1, 6, 2_1)$	2
$\mathfrak{M}_{367}(1, 2, 2_2)$	2	$\mathfrak{M}_{367}(0, 4, 0 : 1)$	1
$\mathfrak{M}_{367}(0, 4, 0 : 2)$	1	$\mathfrak{M}_{367}(0, 2, 1 : 1)$	1
$\mathfrak{M}_{367}(0, 2, 1 : 2)$	2	$\mathfrak{M}_{367}(0, 6, 0)$	2
$\mathfrak{M}_{367}(0, 2, 0)$	2	$\mathfrak{M}_{367}(0, 2, 2_1)$	1
$\mathfrak{M}_{367}(0, 6, 1)$	1	$\mathfrak{M}_{367}(0, 2, 2_2)$	2
$\mathfrak{M}_{367}(0, 6, 2_1)$	4	$\mathfrak{M}_{367}(2, 4, 0)$	2
$\mathfrak{M}_{367}(2, 4, 2_1)$	2	$\mathfrak{M}_{367}(2, 2, 1)$	2
$\mathfrak{M}_{367}(2, 2, 0)$	2	$\mathfrak{M}_{367}(2, 6, 2_1)$	4
$\mathfrak{M}_{367}(2, 6, 2_2)$	S_3		
$\mathfrak{M}_{368}(0, 4, 2 : 1)$	1	$\mathfrak{M}_{368}(0, 4, 2 : 2)$	2
$\mathfrak{M}_{368}(0, 2, 1_1)$	1	$\mathfrak{M}_{368}(0, 4, 1_2)$	1
$\mathfrak{M}_{368}(0, 4, 0 : 1)$	1	$\mathfrak{M}_{368}(0, 4, 0 : 2)$	2
$\mathfrak{M}_{368}(0, 2, 1_2)$	1	$\mathfrak{M}_{368}(0, 2, 2 : 1)$	1
$\mathfrak{M}_{368}(0, 2, 2 : 2)$	2	$\mathfrak{M}_{368}(0, 2, 2 : 3)$	2^2
$\mathfrak{M}_{368}(0, 6, 1_1)$	2	$\mathfrak{M}_{368}(0, 2, 0 : 1)$	2
$\mathfrak{M}_{368}(0, 2, 0 : 2)$	2^2	$\mathfrak{M}_{368}(0, 6, 0)$	2
$\mathfrak{M}_{368}(1, 2, 0 : 1)$	1	$\mathfrak{M}_{368}(1, 2, 0 : 2)$	2
$\mathfrak{M}_{368}(1, 2, 2)$	1	$\mathfrak{M}_{368}(1, 4, 0 : 1)$	1
$\mathfrak{M}_{368}(1, 4, 0 : 2)$	2	$\mathfrak{M}_{368}(1, 6, 2)$	2
$\mathfrak{M}_{368}(2, 4, 1_2)$	1	$\mathfrak{M}_{368}(2, 4, 0)$	2
$\mathfrak{M}_{368}(2, 4, 2)$	2	$\mathfrak{M}_{368}(2, 2, 0 : 1)$	2
$\mathfrak{M}_{368}(2, 2, 0 : 2)$	2^2	$\mathfrak{M}_{368}(2, 2, 1_1)$	2
$\mathfrak{M}_{368}(2, 2, 1_2)$	3	$\mathfrak{M}_{368}(2, 6, 2)$	2^2
$\mathfrak{M}_{377}(6, 2, 6)$	1	$\mathfrak{M}_{377}(2, 2, 6)$	1
$\mathfrak{M}_{377}(2, 2, 8_1)$	1	$\mathfrak{M}_{377}(2, 4, 4 : 1)$	1
$\mathfrak{M}_{377}(2, 4, 4 : 2)$	2	$\mathfrak{M}_{377}(2, 2, 8_2)$	2
$\mathfrak{M}_{377}(2, 6, 4)$	4	$\mathfrak{M}_{377}(4, 6, 8_1)$	1
$\mathfrak{M}_{377}(4, 2, 8_1)$	1	$\mathfrak{M}_{377}(6, 2, 4)$	2
$\mathfrak{M}_{377}(4, 6, 4)$	2	$\mathfrak{M}_{377}(6, 6, 8_2)$	S_3
$\mathfrak{M}_{377}(6, 6, 8_1)$	1		
$\mathfrak{M}_{378}(6, 4, 8 : 1)$	1	$\mathfrak{M}_{378}(6, 4, 8 : 2)$	2
$\mathfrak{M}_{378}(6, 2, 6_2)$	1	$\mathfrak{M}_{378}(6, 4, 4)$	1
$\mathfrak{M}_{378}(6, 2, 4 : 1)$	1	$\mathfrak{M}_{378}(6, 2, 4 : 2)$	2
$\mathfrak{M}_{378}(6, 2, 6_1)$	2	$\mathfrak{M}_{378}(6, 6, 8)$	2
$\mathfrak{M}_{378}(2, 2, 8 : 1)$	1	$\mathfrak{M}_{378}(2, 2, 8 : 2)$	2

$\mathfrak{M}_{378}(2, 2, 4 : 1)$	1	$\mathfrak{M}_{378}(2, 2, 4 : 2)$	2
$\mathfrak{M}_{378}(2, 4, 6_1)$	1	$\mathfrak{M}_{378}(2, 2, 6_2)$	1
$\mathfrak{M}_{378}(2, 4, 8 : 1)$	1	$\mathfrak{M}_{378}(2, 4, 8 : 2)$	2
$\mathfrak{M}_{378}(2, 4, 4)$	1	$\mathfrak{M}_{378}(2, 6, 6_2)$	1
$\mathfrak{M}_{378}(2, 2, 6_1)$	2	$\mathfrak{M}_{378}(2, 6, 4)$	2
$\mathfrak{M}_{388}(2, 4, 3)$	1	$\mathfrak{M}_{388}(4, 4, 3)$	1
$\mathfrak{M}_{388}(4, 4, 5_2)$	1	$\mathfrak{M}_{388}(4, 6, 5_1)$	1
$\mathfrak{M}_{388}(4, 2, 5_1)$	1	$\mathfrak{M}_{388}(6, 4, 7_1)$	1
$\mathfrak{M}_{388}(2, 2, 7_1)$	1	$\mathfrak{M}_{388}(2, 2, 7_2 : 1)$	1
$\mathfrak{M}_{388}(2, 2, 7_2 : 2)$	2	$\mathfrak{M}_{388}(2, 4, 7_2)$	1
$\mathfrak{M}_{388}(4, 4, 7_2)$	1	$\mathfrak{M}_{388}(4, 4, 7_1)$	1
$\mathfrak{M}_{388}(2, 4, 3)$	1	$\mathfrak{M}_{388}(2, 4, 5_2 : 1)$	1
$\mathfrak{M}_{388}(2, 4, 5_2 : 2)$	2	$\mathfrak{M}_{388}(2, 2, 5_1)$	1
$\mathfrak{M}_{388}(2, 6, 5_1)$	1	$\mathfrak{M}_{388}(2, 6, 3 : 1)$	2
$\mathfrak{M}_{388}(2, 6, 3 : 2)$	2^2	$\mathfrak{M}_{388}(6, 6, 7_1)$	2
$\mathfrak{M}_{388}(6, 4, 7_2)$	2	$\mathfrak{M}_{388}(2, 6, 5_2)$	2
* * * * * * * * *	* * * *	* * * * * * * * *	* * * *
$\mathfrak{M}_{555}(2, 2, 2)$	1	$\mathfrak{M}_{555}(4_1, 2, 2)$	1
$\mathfrak{M}_{555}(4_2, 2, 2)$	1	$\mathfrak{M}_{555}(4_2, 4_1, 4_1)$	1
$\mathfrak{M}_{555}(4_2, 4_1, 4_2)$	2		
$\mathfrak{M}_{556}(4_2, 1, 0_2)$	1	$\mathfrak{M}_{556}(2, 1, 2)$	1
$\mathfrak{M}_{556}(4_1, 0_2, 0_2 : 1)$	1	$\mathfrak{M}_{556}(4_1, 0_2, 0_2 : 2)$	2
$\mathfrak{M}_{556}(4_1, 1, 0_2)$	1	$\mathfrak{M}_{556}(4_1, 2, 1)$	1
$\mathfrak{M}_{556}(2, 0_2, 0_2)$	1	$\mathfrak{M}_{556}(4_1, 2, 0_2)$	2
$\mathfrak{M}_{556}(4_1, 2, 2)$	2	$\mathfrak{M}_{556}(4_2, 1, 2)$	2
$\mathfrak{M}_{556}(2, 0_1, 1)$	2	$\mathfrak{M}_{556}(2, 0_2, 2)$	2
$\mathfrak{M}_{556}(4_1, 0_1, 1)$	3	$\mathfrak{M}_{556}(0, 2, 0_2)$	2^3
$\mathfrak{M}_{556}(4_2, 2, 2)$	$2^4 2$	$\mathfrak{M}_{556}(0, 0_1, 0_1)$	$2^4 2^2$
$\mathfrak{M}_{557}(4_1, 4_2, 6)$	1	$\mathfrak{M}_{557}(4_1, 4_2, 2)$	1
$\mathfrak{M}_{557}(4_2, 2, 4_2)$	1	$\mathfrak{M}_{557}(4_2, 6, 4_2)$	1
$\mathfrak{M}_{558}(2, 2, 4_1)$	1	$\mathfrak{M}_{558}(2, 6, 4_1)$	1
$\mathfrak{M}_{558}(2, 4_2, 2)$	1	$\mathfrak{M}_{558}(2, 4_2, 6)$	1
$\mathfrak{M}_{558}(4_2, 4_1, 2)$	1	$\mathfrak{M}_{558}(4_2, 6, 4_1)$	1
$\mathfrak{M}_{558}(4_1, 6, 6 : 1)$	1	$\mathfrak{M}_{558}(4_1, 6, 6 : 2)$	2
$\mathfrak{M}_{558}(4_1, 4_2, 6)$	1	$\mathfrak{M}_{558}(4_1, 2, 2 : 1)$	1
$\mathfrak{M}_{558}(4_1, 2, 2 : 2)$	2	$\mathfrak{M}_{558}(4_1, 4_2, 4_1)$	1
$\mathfrak{M}_{558}(2, 6, 2 : 1)$	1	$\mathfrak{M}_{558}(2, 6, 2 : 2)$	2
$\mathfrak{M}_{558}(4_1, 6, 4_1)$	1	$\mathfrak{M}_{558}(4_1, 2, 4_2)$	1
$\mathfrak{M}_{558}(4_1, 2, 4_1)$	1	$\mathfrak{M}_{558}(4_2, 4_2, 4_2)$	1

$\mathfrak{M}_{558}(2, 6, 6)$	2	$\mathfrak{M}_{558}(4_1, 6, 2)$	2
$\mathfrak{M}_{558}(4_2, 6, 6)$	2	$\mathfrak{M}_{558}(4_2, 2, 2)$	2
$\mathfrak{M}_{558}(0, 6, 2)$	2^2	$\mathfrak{M}_{558}(4_1, 4_2, 4_2)$	2
$\mathfrak{M}_{558}(0, 4_2, 4_2)$	3	$\mathfrak{M}_{558}(4_2, 2, 6)$	2^2
$\mathfrak{M}_{566}(1, 0_2, 0_1)$	1	$\mathfrak{M}_{566}(2, 1, 0_1)$	1
$\mathfrak{M}_{566}(1, 1, 0_1)$	1	$\mathfrak{M}_{566}(0_1, 1, 0_1)$	2
$\mathfrak{M}_{566}(2, 0_2, 0_1)$	2	$\mathfrak{M}_{566}(2, 2, 1)$	2^2
$\mathfrak{M}_{566}(0_1, 0_2, 0_1)$	2^2	$\mathfrak{M}_{566}(2, 2, 0_1)$	2^2
$\mathfrak{M}_{566}(0_1, 0_1, 0_2)$	$2^3 2^2$	$\mathfrak{M}_{566}(0_1, 2, 0_2)$	$2^3 2$
$\mathfrak{M}_{567}(0_1, 6, 0)$	2^2	$\mathfrak{M}_{567}(0_1, 4_1, 0)$	D_8
$\mathfrak{M}_{567}(0_2, 6, 0)$	1	$\mathfrak{M}_{567}(0_2, 4_2, 0)$	1
$\mathfrak{M}_{567}(0_2, 4_2, 2_2)$	1	$\mathfrak{M}_{567}(0_2, 4_2, 2_1)$	1
$\mathfrak{M}_{567}(0_2, 4_1, 0)$	2	$\mathfrak{M}_{567}(0_2, 4_1, 2_1)$	2
$\mathfrak{M}_{567}(0_2, 2, 2_1)$	2	$\mathfrak{M}_{567}(0_2, 6, 2_1)$	2
$\mathfrak{M}_{567}(1, 2, 0)$	1	$\mathfrak{M}_{567}(1, 4_1, 0)$	1
$\mathfrak{M}_{567}(1, 6, 2_1)$	1	$\mathfrak{M}_{567}(1, 4_2, 0)$	1
$\mathfrak{M}_{567}(1, 4_2, 2_2)$	1	$\mathfrak{M}_{567}(1, 4_2, 2_1)$	1
$\mathfrak{M}_{567}(1, 6, 0)$	1	$\mathfrak{M}_{567}(1, 2, 2_1)$	2
$\mathfrak{M}_{567}(1, 4_1, 2_1)$	2	$\mathfrak{M}_{567}(2, 4_2, 1)$	1
$\mathfrak{M}_{567}(2, 4_2, 2_1)$	1	$\mathfrak{M}_{567}(2, 4_2, 0 : 1)$	1
$\mathfrak{M}_{567}(2, 4_2, 0 : 2)$	2	$\mathfrak{M}_{567}(2, 6, 2_1)$	2
$\mathfrak{M}_{567}(2, 4_2, 2_2)$	2	$\mathfrak{M}_{567}(2, 2, 0)$	2
$\mathfrak{M}_{567}(2, 4_1, 0)$	2^2		
$\mathfrak{M}_{568}(0_1, 4, 0)$	2	$\mathfrak{M}_{568}(0_1, 4, 2)$	2
$\mathfrak{M}_{568}(0_1, 4, 1)$	2	$\mathfrak{M}_{568}(0_1, 6, 1)$	2^2
$\mathfrak{M}_{568}(0_1, 6, 0)$	2^2	$\mathfrak{M}_{568}(0_1, 2, 2)$	2^2
$\mathfrak{M}_{568}(0_2, 2, 1_2 : 1)$	1	$\mathfrak{M}_{568}(0_2, 2, 1_2 : 2)$	2
$\mathfrak{M}_{568}(0_2, 2, 2)$	1	$\mathfrak{M}_{568}(0_2, 4_1, 1_1)$	1
$\mathfrak{M}_{568}(0_2, 6, 0)$	1	$\mathfrak{M}_{568}(0_2, 4_2, 0 : 1)$	1
$\mathfrak{M}_{568}(0_2, 4_2, 0 : 2)$	2	$\mathfrak{M}_{568}(0_2, 4_2, 1_1)$	1
$\mathfrak{M}_{568}(0_2, 4_2, 1_2)$	1	$\mathfrak{M}_{568}(0_2, 4_2, 2 : 1)$	1
$\mathfrak{M}_{568}(0_2, 4_2, 2 : 2)$	2	$\mathfrak{M}_{568}(0_2, 6, 2)$	2
$\mathfrak{M}_{568}(0_2, 6, 1_1)$	2	$\mathfrak{M}_{568}(0_2, 6, 1_2)$	2
$\mathfrak{M}_{568}(0_2, 2, 1_1)$	2	$\mathfrak{M}_{568}(0_2, 2, 0)$	2
$\mathfrak{M}_{568}(1, 4_1, 0)$	1	$\mathfrak{M}_{568}(1, 4_1, 2)$	1
$\mathfrak{M}_{568}(1, 6, 2)$	1	$\mathfrak{M}_{568}(1, 2, 2)$	1
$\mathfrak{M}_{568}(1, 6, 0 : 1)$	1	$\mathfrak{M}_{568}(1, 6, 0 : 2)$	2

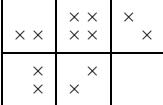
$\mathfrak{M}_{568}(1, 4_2, 2)$	1	$\mathfrak{M}_{568}(1, 2, 0)$	2
$\mathfrak{M}_{568}(1, 2, 2)$	2	$\mathfrak{M}_{568}(1, 4_2, 0)$	1
$\mathfrak{M}_{568}(1, 6, 2)$	2	$\mathfrak{M}_{568}(2, 4_2, 1_1)$	1
$\mathfrak{M}_{568}(2, 4_1, 0)$	1	$\mathfrak{M}_{568}(2, 4_1, 1_2)$	1
$\mathfrak{M}_{568}(2, 4_1, 2)$	1	$\mathfrak{M}_{568}(2, 4_2, 0)$	2
$\mathfrak{M}_{568}(2, 4_2, 2)$	2	$\mathfrak{M}_{568}(2, 6, 1_1)$	2
$\mathfrak{M}_{568}(2, 2, 1_1)$	2	$\mathfrak{M}_{568}(2, 2, 0)$	2
$\mathfrak{M}_{568}(2, 6, 1_2)$	2	$\mathfrak{M}_{568}(2, 6, 2)$	2
$\mathfrak{M}_{577}(4_2, 4_2, 8_2)$	1	$\mathfrak{M}_{577}(6, 4_2, 8_1)$	1
$\mathfrak{M}_{577}(2, 6, 4)$	1	$\mathfrak{M}_{577}(4_1, 4_2, 4)$	1
$\mathfrak{M}_{577}(4_2, 6, 4)$	1	$\mathfrak{M}_{577}(2, 2, 8_1 : 1)$	1
$\mathfrak{M}_{577}(2, 2, 8_1 : 2)$	2	$\mathfrak{M}_{577}(4_2, 4_2, 8_1)$	1
$\mathfrak{M}_{577}(6, 6, 8_1)$	1	$\mathfrak{M}_{577}(6, 4_1, 8_1)$	1
$\mathfrak{M}_{577}(6, 2, 8_1)$	2	$\mathfrak{M}_{577}(4_1, 6, 4)$	2
$\mathfrak{M}_{577}(2, 4_2, 4)$	2	$\mathfrak{M}_{577}(2, 4_1, 8_1)$	2
$\mathfrak{M}_{577}(4_1, 4_1, 4)$	2^2		
$\mathfrak{M}_{578}(4_2, 4_1, 8)$	1	$\mathfrak{M}_{578}(4_2, 4_2, 8)$	1
$\mathfrak{M}_{578}(4_2, 6, 8)$	1	$\mathfrak{M}_{578}(4_2, 2, 8)$	1
$\mathfrak{M}_{578}(4_2, 4_1, 4)$	1	$\mathfrak{M}_{578}(4_2, 2, 4)$	1
$\mathfrak{M}_{578}(4_2, 6, 4)$	1	$\mathfrak{M}_{578}(4_2, 4_2, 6_1)$	1
$\mathfrak{M}_{578}(4_2, 4_1, 6_1)$	1	$\mathfrak{M}_{578}(4_2, 4_2, 4)$	1
$\mathfrak{M}_{588}(4_2, 4_1, 5_2)$	1	$\mathfrak{M}_{588}(6, 6, 5_1)$	1
$\mathfrak{M}_{588}(4_2, 6, 5_1)$	1	$\mathfrak{M}_{588}(4_2, 4_1, 3)$	1
$\mathfrak{M}_{588}(4_2, 4_2, 3)$	1	$\mathfrak{M}_{588}(4_2, 4_1, 7_1)$	1
$\mathfrak{M}_{588}(4_2, 4_2, 7_1)$	1	$\mathfrak{M}_{588}(6, 4_1, 7_1)$	1
$\mathfrak{M}_{588}(2, 2, 7_1)$	1	$\mathfrak{M}_{588}(6, 6, 7_1)$	1
$\mathfrak{M}_{588}(4_1, 4_2, 7_2)$	1	$\mathfrak{M}_{588}(6, 6, 7_2)$	1
$\mathfrak{M}_{588}(2, 2, 7_2)$	1	$\mathfrak{M}_{588}(4_2, 4_2, 7_2)$	1
$\mathfrak{M}_{588}(4_1, 2, 7_2)$	1	$\mathfrak{M}_{588}(6, 4_1, 3)$	1
$\mathfrak{M}_{588}(2, 6, 3 : 1)$	1	$\mathfrak{M}_{588}(2, 6, 3 : 2)$	2
$\mathfrak{M}_{588}(2, 4_1, 3)$	1	$\mathfrak{M}_{588}(4_2, 2, 5_2)$	1
$\mathfrak{M}_{588}(4_2, 6, 5_2)$	1	$\mathfrak{M}_{588}(2, 2, 5_1)$	1
$\mathfrak{M}_{588}(2, 6, 5_1)$	1	$\mathfrak{M}_{588}(2, 2, 5_2)$	2
$\mathfrak{M}_{588}(6, 6, 5_2)$	2	$\mathfrak{M}_{588}(4_2, 2, 3)$	2
$\mathfrak{M}_{588}(4_2, 6, 3)$	2	$\mathfrak{M}_{588}(2, 6, 7_1)$	2
$\mathfrak{M}_{588}(4_2, 6, 7_1)$	2	$\mathfrak{M}_{588}(2, 4_2, 7_1)$	2
$\ast \ast \ast \ast \ast \ast \ast \ast \ast \ast$		$\ast \ast \ast \ast \ast \ast \ast \ast \ast \ast$	$\ast \ast \ast \ast$
$\mathfrak{M}_{666}(0_1, 0_1, 0_1)$	1	$\mathfrak{M}_{666}(0_1, 0_1, 1)$	1

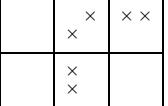
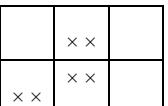
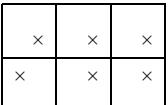
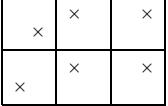
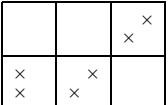
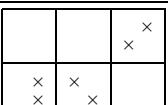
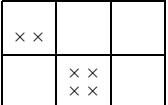
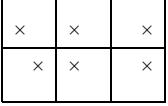
$\mathfrak{M}_{666}(0_1, 1, 0_2)$	2	$\mathfrak{M}_{666}(0_1, 0_2, 0_1)$	2
$\mathfrak{M}_{666}(0_1, 0_2, 0_2)$	2^2	$\mathfrak{M}_{666}(0_2, 0_2, 0_2)$	2^3
$\mathfrak{M}_{667}(0_2, 0, 1)$	1	$\mathfrak{M}_{667}(1, 0, 0)$	1
$\mathfrak{M}_{667}(0_1, 0, 0 : 1)$	1	$\mathfrak{M}_{667}(0_1, 0, 0 : 2)$	2
$\mathfrak{M}_{667}(0_1, 0, 1)$	1	$\mathfrak{M}_{667}(0_1, 0, 2_2 : 1)$	1
$\mathfrak{M}_{667}(0_1, 0, 2_2 : 2)$	2	$\mathfrak{M}_{667}(1, 2_2, 2_1)$	2
$\mathfrak{M}_{667}(0_1, 2_1, 0)$	2	$\mathfrak{M}_{667}(0_2, 2_1, 1)$	2
$\mathfrak{M}_{667}(1, 2_1, 2_1)$	2	$\mathfrak{M}_{667}(0_1, 2_2, 2_1)$	2
$\mathfrak{M}_{667}(0_2, 0, 0)$	2^2		
$\mathfrak{M}_{668}(1, 0, 0 : 1)$	1	$\mathfrak{M}_{668}(1, 0, 0 : 2)$	2
$\mathfrak{M}_{668}(1, 2, 2 : 1)$	1	$\mathfrak{M}_{668}(1, 2, 2 : 2)$	2
$\mathfrak{M}_{668}(0_1, 1_1, 0)$	1	$\mathfrak{M}_{668}(0_1, 2, 1_2)$	1
$\mathfrak{M}_{668}(0_1, 1_2, 0)$	1	$\mathfrak{M}_{668}(0_1, 1_1, 1_1)$	1
$\mathfrak{M}_{668}(0_1, 0, 0)$	1	$\mathfrak{M}_{668}(0_1, 0, 2)$	1
$\mathfrak{M}_{668}(0_1, 1_2, 1_2)$	1	$\mathfrak{M}_{668}(0_1, 1, 2)$	1
$\mathfrak{M}_{668}(0_1, 2, 2)$	1	$\mathfrak{M}_{668}(0_2, 1_1, 1_1)$	2
$\mathfrak{M}_{668}(0_2, 0, 0)$	2	$\mathfrak{M}_{668}(0_2, 1_2, 1_2)$	2
$\mathfrak{M}_{668}(0_2, 1_1, 0)$	2	$\mathfrak{M}_{668}(0_2, 1_1, 1_2)$	2
$\mathfrak{M}_{668}(0_2, 0, 2 : 1)$	2	$\mathfrak{M}_{668}(0_2, 0, 2 : 2)$	2^2
$\mathfrak{M}_{668}(0_2, 2, 2)$	2	$\mathfrak{M}_{668}(0_2, 1_1, 2)$	2
$\mathfrak{M}_{668}(0_2, 1_2, 2)$	2^2		
$\mathfrak{M}_{677}(2_2, 1, 4)$	1	$\mathfrak{M}_{677}(2_1, 0, 4)$	1
$\mathfrak{M}_{677}(1, 0, 4)$	1	$\mathfrak{M}_{677}(2_1, 0, 6)$	1
$\mathfrak{M}_{677}(2_1, 2_1, 6)$	1	$\mathfrak{M}_{677}(2_1, 2_2, 8_1)$	1
$\mathfrak{M}_{677}(1, 2_2, 8_1)$	1	$\mathfrak{M}_{677}(2_1, 1, 8_1)$	1
$\mathfrak{M}_{677}(2_1, 0, 8_1)$	1	$\mathfrak{M}_{677}(1, 0, 8_1)$	1
$\mathfrak{M}_{677}(2_1, 2_1, 8_1)$	1	$\mathfrak{M}_{677}(0, 0, 8_1 : 1)$	1
$\mathfrak{M}_{677}(0, 0, 8_1 : 2)$	2	$\mathfrak{M}_{677}(0, 0, 6)$	1
$\mathfrak{M}_{677}(2_1, 2_1, 8_2)$	2	$\mathfrak{M}_{677}(2_1, 1, 4)$	2
$\mathfrak{M}_{677}(2_2, 2_2, 8_1)$	2	$\mathfrak{M}_{677}(0, 0, 8_2)$	2
$\mathfrak{M}_{677}(2_2, 0, 4 : 1)$	2	$\mathfrak{M}_{677}(2_2, 0, 4 : 2)$	2^2
$\mathfrak{M}_{677}(2_1, 2_1, 4)$	2		
$\mathfrak{M}_{678}(0, 1_1, 6_1)$	1	$\mathfrak{M}_{678}(0, 1_2, 6_1 : 1)$	1
$\mathfrak{M}_{678}(0, 1_2, 6_1 : 2)$	2	$\mathfrak{M}_{678}(0, 0, 8 : 1)$	1
$\mathfrak{M}_{678}(0, 0, 8 : 2)$	2	$\mathfrak{M}_{678}(0, 1_1, 8)$	1
$\mathfrak{M}_{678}(0, 1_1, 4)$	1	$\mathfrak{M}_{678}(0, 2, 4 : 1)$	1
$\mathfrak{M}_{678}(0, 2, 4 : 2)$	2	$\mathfrak{M}_{678}(0, 0, 6_2)$	1
$\mathfrak{M}_{678}(0, 1_1, 6_2)$	1	$\mathfrak{M}_{678}(0, 2, 6_2)$	1

$\mathfrak{M}_{678}(0, 0, 6_1)$	2	$\mathfrak{M}_{678}(0, 2, 6_1)$	2
$\mathfrak{M}_{678}(0, 2, 8)$	2	$\mathfrak{M}_{678}(0, 0, 4)$	2
$\mathfrak{M}_{678}(2_1, 1_2, 6_1)$	1	$\mathfrak{M}_{678}(2_1, 1_2, 8)$	1
$\mathfrak{M}_{678}(2_1, 2, 8)$	1	$\mathfrak{M}_{678}(2_1, 0, 6_2)$	1
$\mathfrak{M}_{678}(2_1, 1_2, 6_2)$	1	$\mathfrak{M}_{678}(2_1, 2, 6_2)$	1
$\mathfrak{M}_{678}(2_1, 0, 4)$	1	$\mathfrak{M}_{678}(2_1, 1, 4)$	1
$\mathfrak{M}_{678}(2_1, 0, 6_1)$	2	$\mathfrak{M}_{678}(2_1, 2, 6_1)$	2
$\mathfrak{M}_{678}(2_1, 0, 8)$	2	$\mathfrak{M}_{678}(2_1, 2, 4)$	2
$\mathfrak{M}_{688}(0, 1_1, 5_2)$	1	$\mathfrak{M}_{688}(0, 1_2, 5_2)$	1
$\mathfrak{M}_{688}(1_2, 2, 5_2)$	1	$\mathfrak{M}_{688}(1_1, 2, 5_2)$	1
$\mathfrak{M}_{688}(0, 0, 7_2)$	1	$\mathfrak{M}_{688}(1_2, 0, 7_2)$	1
$\mathfrak{M}_{688}(1_1, 0, 7_2)$	1	$\mathfrak{M}_{688}(2, 1_1, 7_2)$	1
$\mathfrak{M}_{688}(2, 1_2, 7_2)$	1	$\mathfrak{M}_{688}(2, 2, 7_2)$	1
$\mathfrak{M}_{688}(0, 1_2, 3)$	1	$\mathfrak{M}_{688}(1_2, 2, 3)$	1
$\mathfrak{M}_{688}(0, 0, 7_1)$	1	$\mathfrak{M}_{688}(1_2, 0, 7_1)$	1
$\mathfrak{M}_{688}(1_1, 0, 7_1)$	1	$\mathfrak{M}_{688}(2, 1_2, 7_1)$	1
$\mathfrak{M}_{688}(2, 1_1, 7_1)$	1	$\mathfrak{M}_{688}(2, 2, 7_1)$	1
$\mathfrak{M}_{688}(0, 0, 5_1)$	1	$\mathfrak{M}_{688}(2, 2, 5_1)$	1
$\mathfrak{M}_{688}(0, 0, 5_2)$	2	$\mathfrak{M}_{688}(2, 2, 5_2)$	2
$\mathfrak{M}_{688}(1_1, 2, 3)$	2		
* * * * * * * * * *	* * * *	* * * * * * * * * *	* * * *
$\mathfrak{M}_{777}(8_1, 8_2, 8_1)$	1	$\mathfrak{M}_{777}(8_1, 4, 8_1)$	1
$\mathfrak{M}_{777}(4, 8_1, 4)$	1	$\mathfrak{M}_{777}(4, 4, 8_2)$	2^2
$\mathfrak{M}_{778}(8_1, 4, 6_1)$	1	$\mathfrak{M}_{778}(8_1, 6_1, 6_1 : 1)$	1
$\mathfrak{M}_{778}(8_1, 6_1, 6_1 : 2)$	2	$\mathfrak{M}_{778}(8_1, 8, 6_1)$	1
$\mathfrak{M}_{778}(4, 6_1, 6_1)$	1	$\mathfrak{M}_{778}(8_1, 6_2, 6_1)$	1
$\mathfrak{M}_{778}(8_1, 8, 8)$	1	$\mathfrak{M}_{778}(4, 4, 8 : 1)$	1
$\mathfrak{M}_{778}(4, 4, 8 : 2)$	2	$\mathfrak{M}_{778}(8_1, 4, 4)$	1
$\mathfrak{M}_{778}(8_1, 8, 4)$	1	$\mathfrak{M}_{778}(4_1, 6_2, 8)$	1
* * * * * * * * * *	* * * *	* * * * * * * * * *	* * * *
$\mathfrak{M}_{888}(3, 7_1, 5_1)$	1	$\mathfrak{M}_{888}(3, 7_1, 3 : 1)$	1
$\mathfrak{M}_{888}(3, 7_1, 3 : 2)$	2	$\mathfrak{M}_{888}(3, 7_2, 3)$	1
$\mathfrak{M}_{888}(3, 5_2, 5_1)$	1	$\mathfrak{M}_{888}(5_1, 5_2, 5_2)$	1
$\mathfrak{M}_{888}(5_2, 7_1, 7_1)$	1	$\mathfrak{M}_{888}(5_2, 7_2, 5_2)$	1
$\mathfrak{M}_{888}(7_1, 7_1, 7_2)$	1	$\mathfrak{M}_{888}(7_1, 7_1, 3)$	1
$\mathfrak{M}_{888}(5_2, 5_2, 3)$	1	$\mathfrak{M}_{888}(7_1, 7_2, 7_2)$	1
$\mathfrak{M}_{888}(5_2, 7_1, 5_2)$	2	$\mathfrak{M}_{888}(3, 7_2, 7_2)$	3

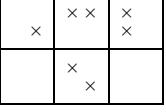
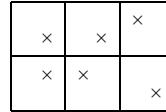
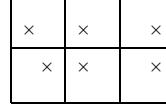
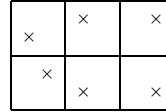
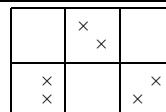
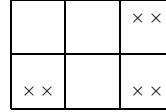
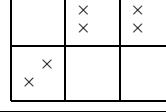
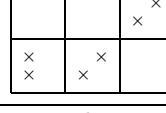
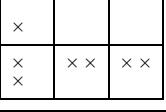
We now define the subgroups for $\mathfrak{M}_{ijk}(t_i, t_j, t_k : l)$ ($l \in \{1, 2, 3\}$) by giving the $X_i \in \mathfrak{X}$ such that $G_i = Stab_G X_i$ ($i = 1, 2, 3$).

$\mathfrak{M}_{ijk}(t_i, t_j, t_k : l)$	X_1	X_2	X_3									
$\mathfrak{M}_{116}(0, 0, 0 : 1)$	$\{9\}$	$\{22\}$	$\{17, 11\}$									
$\mathfrak{M}_{116}(0, 0, 0 : 2)$	$\{19\}$	$\{22\}$	$\{17, 11\}$									
$\mathfrak{M}_{118}(0, 0, 1 : 1)$	$\{11\}$	$\{22\}$	e_2									
$\mathfrak{M}_{118}(0, 0, 1 : 2)$	$\{1\}$	$\{22\}$	e_2									
$\mathfrak{M}_{125}(0, 0, 2 : 1)$	$\{19\}$	h_2	O_2									
$\mathfrak{M}_{125}(0, 0, 2 : 2)$	$\{0\}$	h_2	O_2									
$\mathfrak{M}_{126}(0, 0, 0 : 1)$	$\{22\}$	h_1	$\{17, 11\}$									
$\mathfrak{M}_{126}(0, 0, 0 : 2)$	$\{4\}$	h_1	$\{17, 11\}$									
$\mathfrak{M}_{128}(0, 1, 3 : 1)$	$\{22\}$	h_1	e_2									
$\mathfrak{M}_{128}(0, 1, 3 : 2)$	$\{4\}$	h_1	e_2									
$\mathfrak{M}_{128}(0, 0, 3 : 1)$	$\{17\}$	h_1	e_2									
$\mathfrak{M}_{128}(0, 0, 3 : 2)$	$\{1\}$	h_1	e_2									
$\mathfrak{M}_{133}(0, 0, 3 : 1)$	$\{22\}$	h_2	h_7^*									
$\mathfrak{M}_{133}(0, 0, 3 : 2)$	$\{0\}$	h_2	h_7^*									
$\mathfrak{M}_{135}(0, 0, 2 : 1)$	$\{4\}$	h_2^*	O_3									
$\mathfrak{M}_{135}(0, 0, 2 : 2)$	$\{8\}$	h_2^*	O_3									
$\mathfrak{M}_{135}(1, 0, 2 : 1)$	$\{0\}$	h_2^*	O_3									
$\mathfrak{M}_{135}(1, 0, 2 : 2)$	$\{17\}$	h_2^*	O_3									
$\mathfrak{M}_{135}(0, 0, 4 : 1)$	$\{0\}$	h_1^*	O_2									
$\mathfrak{M}_{135}(0, 0, 4 : 2)$	$\{22\}$	h_1^*	O_2									
$\mathfrak{M}_{136}(0, 0, 1 : 1)$	$\{22\}$	h_1^*	$\{17, 11\}$									
$\mathfrak{M}_{136}(0, 0, 1 : 2)$	$\{0\}$	h_1^*	$\{17, 11\}$									
$\mathfrak{M}_{138}(0, 1, 2 : 1)$	$\{13\}$	h_2^*	e_2									
$\mathfrak{M}_{138}(0, 1, 2 : 2)$	$\{8\}$	h_2^*	e_2									
$\mathfrak{M}_{138}(1, 0, 2 : 1)$	$\{0\}$	h_2^*	e_2									
$\mathfrak{M}_{138}(1, 0, 2 : 2)$	$\{17\}$	h_2^*	e_2									
$\mathfrak{M}_{138}(0, 0, 4 : 1)$	$\{0\}$	h_6^*	e_2									
$\mathfrak{M}_{138}(0, 0, 4 : 2)$	$\{17\}$	h_6^*	e_2									
$\mathfrak{M}_{155}(0, 0, 4_1 : 1)$	$\{19\}$	O_2	O_4									
$\mathfrak{M}_{155}(0, 0, 4_1 : 2)$	$\{0\}$	O_2	O_4									
$\mathfrak{M}_{156}(0, 0, 2 : 1)$	$\{22\}$	O_2	$\{17, 11\}$									
$\mathfrak{M}_{156}(0, 0, 2 : 2)$	$\{8\}$	O_2	$\{17, 11\}$									
$\mathfrak{M}_{157}(0, 1, 4_2 : 1)$	$\{16\}$	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td></td><td>$\times \times$</td><td></td></tr> <tr> <td>\times</td><td>\times</td><td>\times</td></tr> <tr> <td>\times</td><td></td><td></td></tr> </table>		$\times \times$		\times	\times	\times	\times			d_1
	$\times \times$											
\times	\times	\times										
\times												

$\mathfrak{m}_{157}(0, 1, 4_2 : 2)$	$\{0\}$		d_1
$\mathfrak{m}_{158}(0, 1, 2 : 1)$	$\{4\}$	O_3	e_2
$\mathfrak{m}_{158}(0, 1, 2 : 2)$	$\{8\}$	O_3	e_2
$\mathfrak{m}_{158}(0, 1, 4_1 : 1)$	$\{20\}$	O_7	e_2
$\mathfrak{m}_{158}(0, 1, 4_1 : 2)$	$\{16\}$	O_7	e_2
$\mathfrak{m}_{158}(0, 0, 4_1 : 1)$	$\{12\}$	O_7	e_2
$\mathfrak{m}_{158}(0, 0, 4_1 : 2)$	$\{3\}$	O_7	e_2
$\mathfrak{m}_{158}(0, 0, 6 : 1)$	$\{0\}$	O_2	e_2
$\mathfrak{m}_{158}(0, 0, 6 : 2)$	$\{1\}$	O_2	e_2
$\mathfrak{m}_{158}(0, 1, 6 : 1)$	$\{22\}$	O_2	e_2
$\mathfrak{m}_{158}(0, 1, 6 : 2)$	$\{8\}$	O_2	e_2
$\mathfrak{m}_{166}(0, 0, 0_1 : 1)$	$\{0\}$	$\{17, 11\}$	$\{22, 19\}$
$\mathfrak{m}_{166}(0, 0, 0_1 : 2)$	$\{1\}$	$\{17, 11\}$	$\{22, 19\}$
$\mathfrak{m}_{167}(0, 0, 1 : 1)$	$\{1\}$	$\{22, 19\}$	d_1
$\mathfrak{m}_{167}(0, 0, 1 : 2)$	$\{4\}$	$\{22, 19\}$	d_1
$\mathfrak{m}_{168}(0, 0, 0 : 1)$	$\{1\}$	$\{17, 11\}$	e_2
$\mathfrak{m}_{168}(0, 0, 0 : 2)$	$\{0\}$	$\{17, 11\}$	e_2
$\mathfrak{m}_{168}(0, 1, 0 : 1)$	$\{4\}$	$\{17, 11\}$	e_2
$\mathfrak{m}_{168}(0, 1, 0 : 2)$	$\{8\}$	$\{17, 11\}$	e_2
$\mathfrak{m}_{168}(0, 1, 0 : 3)$	$\{22\}$	$\{17, 11\}$	e_2
$\mathfrak{m}_{168}(0, 0, 2 : 1)$	$\{1\}$	$\{22, 19\}$	e_2
$\mathfrak{m}_{168}(0, 0, 2 : 2)$	$\{0\}$	$\{22, 19\}$	e_2
$\mathfrak{m}_{168}(0, 1, 2 : 1)$	$\{4\}$	$\{22, 19\}$	e_2
$\mathfrak{m}_{168}(0, 1, 2 : 2)$	$\{8\}$	$\{22, 19\}$	e_2
$\mathfrak{m}_{177}(1, 1, 8_1 : 1)$	$\{16\}$	d_1	
$\mathfrak{m}_{177}(1, 1, 8_1 : 2)$	$\{22\}$	d_1	
$\mathfrak{m}_{188}(0, 0, 7_1 : 1)$	$\{12\}$	e_2	e_4
$\mathfrak{m}_{188}(0, 0, 7_1 : 2)$	$\{9\}$	e_2	e_4
$\mathfrak{m}_{188}(1, 1, 7_1 : 1)$	$\{16\}$	e_2	e_4
$\mathfrak{m}_{188}(1, 1, 7_1 : 2)$	$\{22\}$	e_2	e_4
$\ast \ast \ast \ast \ast \ast \ast \ast$	$\ast \ast \ast \ast \ast \ast \ast \ast$	$\ast \ast \ast \ast \ast \ast \ast \ast$	$\ast \ast \ast \ast \ast \ast \ast \ast$

$\mathfrak{M}_{222}(2, 2, 2 : 1)$	h_2	h_5	
$\mathfrak{M}_{222}(2, 2, 2 : 2)$	h_1	h_3	
$\mathfrak{M}_{223}(2, 3, 1 : 1)$	h_2	h_5	h_5^*
$\mathfrak{M}_{223}(2, 3, 1 : 2)$	h_2	h_3	h_1^*
$\mathfrak{M}_{223}(2, 3, 3 : 1)$	h_1	h_3	h_1^*
$\mathfrak{M}_{223}(2, 3, 3 : 2)$	h_2	h_5	h_2^*
$\mathfrak{M}_{225}(2, 2, 2 : 1)$	h_2	h_3	O_4
$\mathfrak{M}_{225}(2, 2, 2 : 2)$	h_2		O_2
$\mathfrak{M}_{226}(2, 0, 0 : 1)$	h_1		$\{22, 19\}$
$\mathfrak{M}_{226}(2, 0, 0 : 2)$	h_1	h_4	$\{17, 11\}$
$\mathfrak{M}_{227}(2, 4, 4 : 1)$	h_3	h_4	d_1
$\mathfrak{M}_{227}(2, 4, 4 : 2)$	h_3		d_1
$\mathfrak{M}_{228}(2, 3, 3 : 1)$	h_1	h_3	e_1
$\mathfrak{M}_{228}(2, 3, 3 : 2)$	h_1		e_2
$\mathfrak{M}_{228}(2, 3, 3 : 3)$	h_1	h_3	e_2
$\mathfrak{M}_{228}(2, 3, 5 : 1)$	h_1		e_2
$\mathfrak{M}_{228}(2, 3, 5 : 2)$	h_1		e_2
$\mathfrak{M}_{228}(2, 1, 3 : 1)$	h_2		e_2

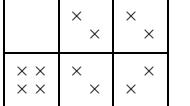
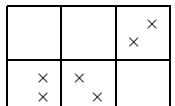
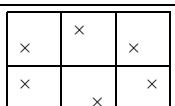
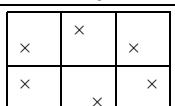
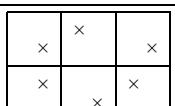
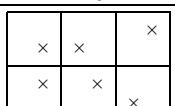
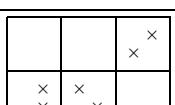
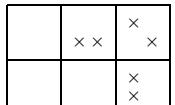
$\mathfrak{M}_{228}(2, 1, 3 : 2)$	h_1	h_6	e_2
$\mathfrak{M}_{233}(3, 3, 3 : 1)$	h_1	h_5^*	
$\mathfrak{M}_{233}(3, 3, 3 : 1)$	h_1	h_5^*	
$\mathfrak{M}_{233}(3, 3, 3 : 2)$	h_6	h_6^*	h_5^*
$\mathfrak{M}_{233}(1, 1, 3 : 1)$	h_2	h_1^*	h_7^*
$\mathfrak{M}_{233}(1, 1, 3 : 2)$		h_1^*	h_7^*
$\mathfrak{M}_{234}(3, 3, 2 : 1)$	h_1	h_1^*	
$\mathfrak{M}_{234}(3, 3, 2 : 2)$	h_1	h_1^*	
$\mathfrak{M}_{235}(3, 2, 2 : 1)$	h_1	h_1^*	
$\mathfrak{M}_{235}(3, 2, 2 : 2)$	h_2	h_5^*	
$\mathfrak{M}_{235}(3, 4, 4 : 1)$	h_1	h_6^*	
$\mathfrak{M}_{235}(3, 4, 4 : 2)$	h_2	h_1^*	O_3
$\mathfrak{M}_{235}(1, 4, 2 : 1)$	h_2	h_6^*	O_7
$\mathfrak{M}_{235}(1, 4, 2 : 2)$	h_2	h_6^*	
$\mathfrak{M}_{236}(3, 0, 0 : 1)$	h_1	h_6^*	$\{17, 13\}$
$\mathfrak{M}_{236}(3, 0, 0 : 2)$	h_1	h_6^*	$\{17, 4\}$
$\mathfrak{M}_{236}(3, 0, 0 : 3)$	h_1	h_6^*	$\{17, 11\}$

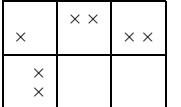
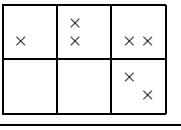
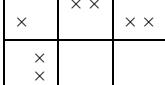
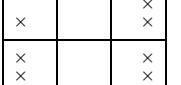
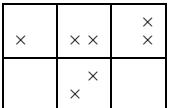
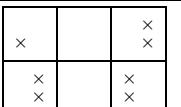
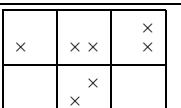
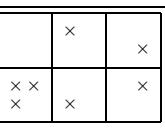
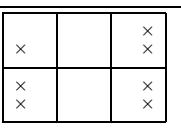
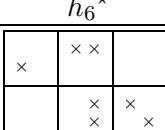
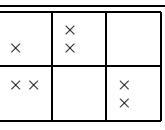
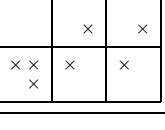
$\mathfrak{M}_{236}(1, 0, 0 : 1)$	h_2	h_6^*	$\{4, 19\}$
$\mathfrak{M}_{236}(1, 0, 0 : 2)$	h_2	h_1^*	$\{0, 13\}$
$\mathfrak{M}_{236}(1, 1, 0 : 1)$	h_2	h_6^*	$\{9, 19\}$
$\mathfrak{M}_{236}(1, 1, 0 : 2)$	h_2	h_1^*	$\{22, 19\}$
$\mathfrak{M}_{237}(3, 4, 4 : 1)$	h_3	h_1^*	d_1
$\mathfrak{M}_{237}(3, 4, 4 : 2)$	h_3		d_1
$\mathfrak{M}_{237}(3, 4, 2 : 1)$	h_3	h_9^*	d_1
$\mathfrak{M}_{237}(3, 4, 2 : 2)$		h_9^*	d_1
$\mathfrak{M}_{237}(1, 4, 2 : 1)$		h_9^*	d_1
$\mathfrak{M}_{237}(1, 4, 2 : 2)$	h_6	h_9^*	d_1
$\mathfrak{M}_{237}(1, 4, 4 : 1)$		h_6^*	d_1
$\mathfrak{M}_{237}(1, 4, 4 : 2)$	h_3	h_6^*	d_1
$\mathfrak{M}_{238}(3, 3, 4 : 1)$		h_5^*	e_2
$\mathfrak{M}_{238}(3, 3, 4 : 2)$		h_5^*	e_2
$\mathfrak{M}_{238}(3, 3, 2 : 1)$		h_2^*	e_2
$\mathfrak{M}_{238}(3, 3, 2 : 2)$		h_2^*	e_2
$\mathfrak{M}_{238}(3, 3, 2 : 3)$	h_4	h_2^*	e_2
$\mathfrak{M}_{238}(3, 1, 2 : 1)$	h_6		e_2

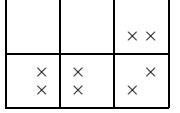
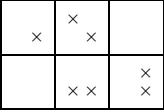
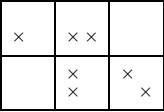
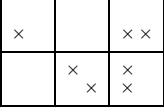
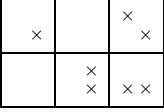
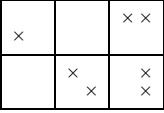
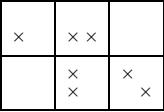
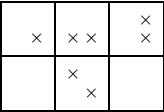
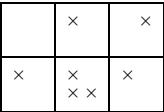
$\mathfrak{M}_{238}(3, 1, 2 : 2)$	h_2	h_2^*	e_2
$\mathfrak{M}_{238}(1, 3, 2 : 1)$		h_2^*	e_2
$\mathfrak{M}_{238}(1, 3, 2 : 2)$		h_2^*	e_2
$\mathfrak{M}_{238}(1, 3, 4 : 1)$		h_6^*	e_2
$\mathfrak{M}_{238}(1, 3, 4 : 2)$	h_4	h_6^*	e_2
$\mathfrak{M}_{255}(2, 2, 4_1 : 1)$	h_2	O_2	
$\mathfrak{M}_{255}(2, 2, 4_1 : 2)$	h_2	O_2	
$\mathfrak{M}_{256}(2, 0, 1 : 1)$	h_2	O_2	$\{3, 4\}$
$\mathfrak{M}_{256}(2, 0, 1 : 2)$	h_2	O_2	$\{8, 4\}$
$\mathfrak{M}_{257}(2, 4, 6 : 1)$			d_1
$\mathfrak{M}_{257}(2, 4, 6 : 2)$			d_1
$\mathfrak{M}_{257}(2, 4, 4_1 : 1)$		O_3	d_1
$\mathfrak{M}_{257}(2, 4, 4_1 : 2)$		O_3	d_1
$\mathfrak{M}_{257}(2, 2, 4_2 : 1)$			d_1

$\mathfrak{M}_{257}(2, 2, 4_2 : 2)$			d_1
$\mathfrak{M}_{258}(0, 3, 4_2 : 1)$	h_1	O_2	e_1
$\mathfrak{M}_{258}(0, 3, 4_2 : 2)$	h_3	O_3	e_1
$\mathfrak{M}_{258}(2, 3, 2 : 1)$	h_1		e_1
$\mathfrak{M}_{258}(2, 3, 2 : 2)$		O_3	e_2
$\mathfrak{M}_{258}(2, 3, 4_2 : 1)$		O_3	e_1
$\mathfrak{M}_{258}(2, 3, 4_2 : 2)$		O_3	e_1
$\mathfrak{M}_{258}(2, 3, 6 : 1)$		O_2	e_2
$\mathfrak{M}_{258}(2, 3, 6 : 2)$		O_2	e_2
$\mathfrak{M}_{258}(2, 1, 4_2 : 1)$		O_3	e_1
$\mathfrak{M}_{258}(2, 1, 4_2 : 2)$	h_5	O_2	e_1
$\mathfrak{M}_{258}(2, 5, 4_2 : 1)$		O_3	e_1
$\mathfrak{M}_{258}(2, 5, 4_2 : 2)$	h_2	O_2	e_1
$\mathfrak{M}_{258}(2, 5, 6 : 1)$		O_2	e_2

$\mathfrak{M}_{258}(2, 5, 6 : 2)$			e_2
$\mathfrak{M}_{258}(4, 3, 4_1 : 1)$		O_7	e_2
$\mathfrak{M}_{258}(4, 3, 4_1 : 2)$		O_7	e_2
$\mathfrak{M}_{258}(4, 3, 6 : 1)$		O_2	e_2
$\mathfrak{M}_{258}(4, 3, 6 : 2)$	h_3	O_2	e_2
$\mathfrak{M}_{258}(4, 3, 2 : 1)$		O_3	e_2
$\mathfrak{M}_{258}(4, 3, 2 : 2)$	h_4	O_3	e_2
$\mathfrak{M}_{267}(0, 4, 0 : 1)$	h_3	$\{2, 19\}$	d_1
$\mathfrak{M}_{267}(0, 4, 0 : 2)$	h_3	$\{7, 10\}$	d_1
$\mathfrak{M}_{267}(0, 2, 0 : 1)$	h_5	$\{2, 16\}$	d_1
$\mathfrak{M}_{267}(0, 2, 0 : 2)$	h_5	$\{4, 13\}$	d_1
$\mathfrak{M}_{268}(0, 5, 0 : 1)$		$\{21, 12\}$	e_2
$\mathfrak{M}_{268}(0, 5, 0 : 2)$		$\{11, 17\}$	e_2
$\mathfrak{M}_{268}(1, 3, 0 : 1)$	h_1	$\{0, 12\}$	e_2
$\mathfrak{M}_{268}(1, 3, 0 : 2)$	h_1	$\{0, 17\}$	e_2
$\mathfrak{M}_{268}(1, 3, 2 : 1)$	h_1	$\{8, 16\}$	e_2
$\mathfrak{M}_{268}(1, 3, 2 : 2)$	h_1	$\{4, 8\}$	e_2
$\mathfrak{M}_{277}(2, 2, 8_1 : 1)$	h_5	d_1	
$\mathfrak{M}_{277}(2, 2, 8_1 : 2)$		d_1	

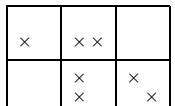
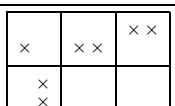
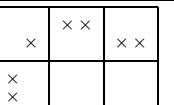
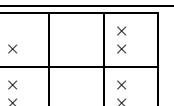
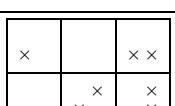
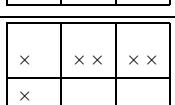
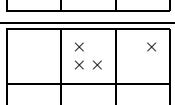
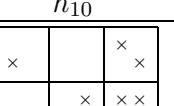
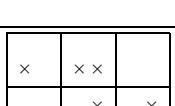
$\mathfrak{M}_{277}(4, 2, 8_1 : 1)$	h_3	d_1	
$\mathfrak{M}_{277}(4, 2, 8_1 : 2)$		d_1	
$\mathfrak{M}_{278}(4, 1, 4 : 1)$		d_1	e_2
$\mathfrak{M}_{278}(4, 1, 4 : 2)$	h_6	d_1	e_2
$\mathfrak{M}_{278}(4, 3, 8 : 1)$		d_1	e_3
$\mathfrak{M}_{278}(4, 3, 8 : 2)$	h_4	d_1	e_3
$\mathfrak{M}_{278}(4, 5, 8 : 1)$		d_1	e_3
$\mathfrak{M}_{278}(4, 5, 8 : 2)$	h_6	d_1	e_3
$\mathfrak{M}_{288}(3, 5, 7_1 : 1)$		e_4	e_2
$\mathfrak{M}_{288}(3, 5, 7_1 : 2)$		e_4	e_2
$\mathfrak{M}_{288}(1, 3, 7_1 : 1)$		e_2	e_4
$\mathfrak{M}_{288}(1, 3, 7_1 : 2)$		e_4	e_2
*****	*****	*****	*****
$\mathfrak{M}_{333}(1, 1, 3 : 1)$		h_6^*	h_5^*
$\mathfrak{M}_{333}(1, 1, 3 : 2)$	h_6^*	h_5^*	h_2^*

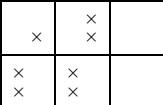
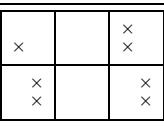
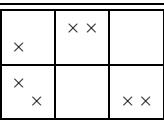
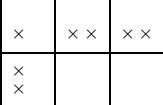
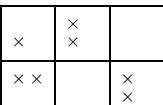
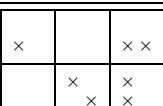
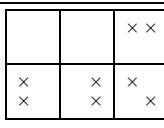
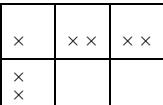
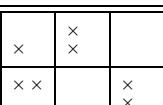
$\mathfrak{M}_{333}(3, 3, 3 : 1)$	h_1^*	h_7^*	
$\mathfrak{M}_{333}(3, 3, 3 : 2)$	h_1^*	h_7^*	
$\mathfrak{M}_{334}(3, 2, 2 : 1)$	h_1^*	h_5^*	
$\mathfrak{M}_{334}(3, 2, 2 : 2)$			
$\mathfrak{M}_{334}(1, 2, 2 : 1)$	h_2^*	h_5^*	h_8^*
$\mathfrak{M}_{334}(1, 2, 2 : 2)$	h_2^*	h_5^*	
$\mathfrak{M}_{334}(1, 2, 4 : 1)$	h_2^*	h_5^*	
$\mathfrak{M}_{334}(1, 2, 4 : 2)$	h_5^*	h_9^*	
$\mathfrak{M}_{334}(3, 4, 4 : 1)$	h_5^*		
$\mathfrak{M}_{334}(3, 4, 4 : 2)$	h_6^*	h_5^*	h_4^*
$\mathfrak{M}_{335}(1, 2, 4 : 1)$		h_5^*	O_3
$\mathfrak{M}_{335}(1, 2, 4 : 2)$	h_5^*		O_3
$\mathfrak{M}_{335}(3, 4, 2 : 1)$	h_1^*		O_2

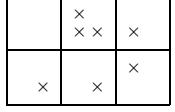
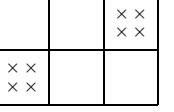
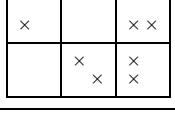
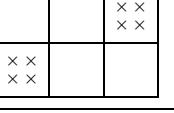
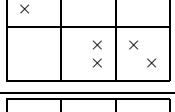
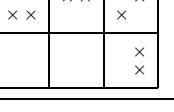
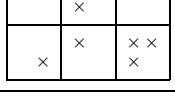
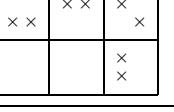
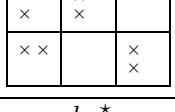
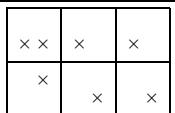
$\mathfrak{M}_{335}(3, 4, 2 : 2)$	h_1^*	h_7^*	
$\mathfrak{M}_{335}(3, 4, 4 : 1)$	h_1^*		O_2
$\mathfrak{M}_{335}(3, 4, 4 : 2)$	h_1^*		O_2
$\mathfrak{M}_{336}(3, 0, 1 : 1)$	h_1^*	h_7^*	$\{1, 17\}$
$\mathfrak{M}_{336}(3, 0, 1 : 2)$	h_1^*	h_7^*	$\{0, 17\}$
$\mathfrak{M}_{336}(1, 1, 0 : 1)$	h_2^*	h_5^*	$\{13, 17\}$
$\mathfrak{M}_{336}(1, 1, 0 : 2)$	h_1^*	h_2^*	$\{11, 13\}$
$\mathfrak{M}_{336}(1, 2, 0 : 1)$	h_2^*	h_5^*	$\{0, 22\}$
$\mathfrak{M}_{336}(1, 2, 0 : 2)$	h_6^*	h_2^*	$\{11, 17\}$
$\mathfrak{M}_{337}(3, 4, 2 : 1)$	h_1^*	h_9^*	d_1
$\mathfrak{M}_{337}(3, 4, 2 : 2)$	h_6^*		d_1
$\mathfrak{M}_{337}(3, 6, 4 : 1)$	h_5^*		d_1
$\mathfrak{M}_{337}(3, 6, 4 : 2)$	h_5^*		d_1
$\mathfrak{M}_{337}(3, 2, 2 : 1)$	h_9^*		d_1
$\mathfrak{M}_{337}(3, 2, 2 : 2)$	h_9^*		d_1
$\mathfrak{M}_{337}(1, 4, 2 : 1)$	h_6^*		d_1

$\mathfrak{M}_{337}(1, 4, 2 : 2)$	h_6^*	<table border="1"> <tr><td>x</td><td>x x</td><td>x</td></tr> <tr><td></td><td>x</td><td></td></tr> <tr><td></td><td>x</td><td></td></tr> </table>	x	x x	x		x			x		d_1
x	x x	x										
	x											
	x											
$\mathfrak{M}_{338}(3, 2, 4 : 1)$	h_2^*	<table border="1"> <tr><td>x</td><td>x x</td><td></td></tr> <tr><td>x</td><td></td><td>x x</td></tr> <tr><td>x</td><td></td><td>x x</td></tr> </table>	x	x x		x		x x	x		x x	e_1
x	x x											
x		x x										
x		x x										
$\mathfrak{M}_{338}(3, 2, 4 : 2)$	h_2^*	<table border="1"> <tr><td>x</td><td>x x</td><td>x x</td></tr> <tr><td>x</td><td>x</td><td></td></tr> <tr><td></td><td></td><td>x</td></tr> </table>	x	x x	x x	x	x				x	e_2
x	x x	x x										
x	x											
		x										
$\mathfrak{M}_{338}(3, 2, 2 : 1)$	h_2^*	<table border="1"> <tr><td></td><td>x</td><td>x</td></tr> <tr><td>x x</td><td>x</td><td></td></tr> <tr><td>x</td><td></td><td>x</td></tr> </table>		x	x	x x	x		x		x	e_2
	x	x										
x x	x											
x		x										
$\mathfrak{M}_{338}(3, 2, 2 : 2)$	h_2^*	<table border="1"> <tr><td></td><td>x x</td><td>x</td></tr> <tr><td>x</td><td>x</td><td>x</td></tr> <tr><td>x</td><td>x</td><td>x</td></tr> </table>		x x	x	x	x	x	x	x	x	e_1
	x x	x										
x	x	x										
x	x	x										
$\mathfrak{M}_{338}(1, 2, 4 : 1)$	h_2^*	<table border="1"> <tr><td>x</td><td>x x</td><td></td></tr> <tr><td></td><td>x x</td><td>x</td></tr> <tr><td></td><td>x x</td><td>x</td></tr> </table>	x	x x			x x	x		x x	x	e_2
x	x x											
	x x	x										
	x x	x										
$\mathfrak{M}_{338}(1, 2, 4 : 2)$	h_2^*	<table border="1"> <tr><td>x</td><td>x x</td><td></td></tr> <tr><td>x</td><td>x</td><td>x</td></tr> <tr><td>x</td><td>x</td><td>x</td></tr> </table>	x	x x		x	x	x	x	x	x	e_2
x	x x											
x	x	x										
x	x	x										
$\mathfrak{M}_{345}(2, 2, 4 : 1)$	h_2^*	<table border="1"> <tr><td>x</td><td></td><td>x</td></tr> <tr><td></td><td>x</td><td>x x</td></tr> <tr><td>x</td><td>x</td><td>x x</td></tr> </table>	x		x		x	x x	x	x	x x	O_3
x		x										
	x	x x										
x	x	x x										
$\mathfrak{M}_{345}(2, 2, 4 : 2)$	h_2^*	h_8^*	O_3									
$\mathfrak{M}_{345}(2, 4, 4 : 1)$	<table border="1"> <tr><td>x</td><td>x</td><td>x</td></tr> <tr><td></td><td>x</td><td>x</td></tr> <tr><td></td><td>x x</td><td></td></tr> </table>	x	x	x		x	x		x x		h_4^*	O_7
x	x	x										
	x	x										
	x x											
$\mathfrak{M}_{345}(2, 4, 4 : 2)$	h_2^*	h_8^*	O_7									
$\mathfrak{M}_{346}(2, 0, 0 : 1)$	h_2^*	h_{10}^*	$\{8, 20\}$									
$\mathfrak{M}_{346}(2, 0, 0 : 2)$	h_2^*	h_{10}^*	$\{8, 5\}$									
$\mathfrak{M}_{346}(2, 1, 0 : 1)$	h_2^*	h_{10}^*	$\{5, 19\}$									

$\mathfrak{M}_{346}(2, 1, 0 : 2)$	h_2^*	h_{10}^*	$\{9, 19\}$
$\mathfrak{M}_{347}(4, 2, 2 : 1)$			d_1
$\mathfrak{M}_{347}(4, 2, 2 : 2)$		h_{10}^*	d_1
$\mathfrak{M}_{347}(2, 6, 4 : 1)$			d_1
$\mathfrak{M}_{347}(2, 6, 4 : 2)$			d_1
$\mathfrak{M}_{347}(2, 2, 4 : 1)$			d_1
$\mathfrak{M}_{347}(2, 2, 4 : 2)$	h_9^*		d_1
$\mathfrak{M}_{348}(4, 4, 5 : 1)$		h_4^*	e_2
$\mathfrak{M}_{348}(4, 4, 5 : 2)$		h_4^*	e_2
$\mathfrak{M}_{348}(4, 2, 3 : 1)$		h_3^*	e_2
$\mathfrak{M}_{348}(4, 2, 3 : 2)$		h_3^*	e_2

$\mathfrak{M}_{348}(4, 4, 3 : 1)$		h_3^*	e_2
$\mathfrak{M}_{348}(4, 4, 3 : 2)$		h_3^*	e_2
$\mathfrak{M}_{348}(4, 6, 5 : 1)$		h_4^*	e_2
$\mathfrak{M}_{348}(4, 6, 5 : 2)$	h_1^*	h_4^*	e_2
$\mathfrak{M}_{348}(4, 2, 1 : 1)$	h_2^*		e_2
$\mathfrak{M}_{348}(4, 2, 1 : 2)$	h_2^*		e_2
$\mathfrak{M}_{348}(0, 2, 5 : 1)$		h_4^*	e_2
$\mathfrak{M}_{348}(0, 2, 5 : 2)$		h_4^*	e_2
$\mathfrak{M}_{348}(2, 4, 5 : 1)$		h_4^*	e_2
$\mathfrak{M}_{348}(2, 4, 5 : 2)$	h_6^*	h_{10}^*	e_2
$\mathfrak{M}_{348}(2, 4, 3 : 1)$	h_6^*		e_2
$\mathfrak{M}_{348}(2, 4, 3 : 2)$		h_3^*	e_2
$\mathfrak{M}_{348}(2, 6, 3 : 1)$	h_1^*		e_2

$\mathfrak{M}_{348}(2, 6, 3 : 2)$		h_3^*	e_2
$\mathfrak{M}_{348}(2, 2, 3 : 1)$			e_1
$\mathfrak{M}_{348}(2, 2, 3 : 2)$	h_2^*		e_2
$\mathfrak{M}_{348}(2, 4, 1 : 1)$	h_5^*	h_8^*	e_2
$\mathfrak{M}_{348}(2, 4, 1 : 2)$	h_6^*		e_2
$\mathfrak{M}_{355}(2, 2, 4_1 : 1)$		O_2	O_4
$\mathfrak{M}_{355}(2, 2, 4_1 : 2)$		O_2	O_4
$\mathfrak{M}_{355}(2, 2, 2 : 1)$		O_2	
$\mathfrak{M}_{355}(2, 2, 2 : 2)$	h_2^*	O_2	
$\mathfrak{M}_{355}(2, 2, 4_1 : 1)$		O_2	O_4
$\mathfrak{M}_{355}(2, 2, 4_1 : 2)$		O_2	O_4

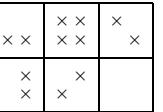
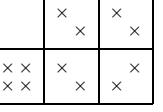
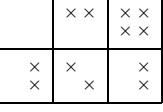
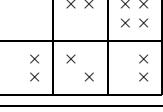
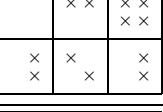
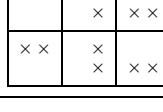
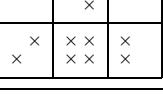
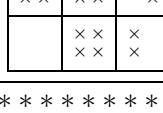
$\mathfrak{M}_{356}(2, 0, 0_2 : 1)$	h_2^*	O_2	$\{9, 20\}$
$\mathfrak{M}_{356}(2, 0, 0_2 : 2)$	h_2^*	O_2	$\{5, 6\}$
$\mathfrak{M}_{356}(2, 1, 0_1 : 1)$	h_2^*	O_2	$\{1, 22\}$
$\mathfrak{M}_{356}(2, 1, 0_1 : 2)$	h_2^*	O_2	$\{0, 8\}$
$\mathfrak{M}_{357}(2, 2, 6 : 1)$			d_1
$\mathfrak{M}_{357}(2, 2, 6 : 2)$			d_1
$\mathfrak{M}_{358}(4, 2, 4_2 : 1)$		O_5	e_2
$\mathfrak{M}_{358}(4, 2, 4_2 : 2)$		O_4	e_2
$\mathfrak{M}_{358}(4, 2, 2 : 1)$		O_3	e_2
$\mathfrak{M}_{358}(4, 2, 2 : 2)$	h_2^*		e_2
$\mathfrak{M}_{358}(4, 4, 2 : 1)$		O_3	e_2
$\mathfrak{M}_{358}(4, 4, 2 : 2)$	h_6^*		e_2
$\mathfrak{M}_{366}(1, 0, 0_1 : 1)$		$\{11, 17\}$	$\{22, 19\}$
$\mathfrak{M}_{366}(1, 0, 0_1 : 2)$	h_2^*	$\{11, 17\}$	$\{19, 22\}$
$\mathfrak{M}_{366}(0, 0, 0_1 : 1)$		$\{11, 17\}$	$\{22, 19\}$

$\mathfrak{M}_{366}(0, 0, 0_1 : 2)$		$\{11, 17\}$	$\{22, 19\}$
$\mathfrak{M}_{367}(1, 2, 0 : 1)$		$\{1, 13\}$	d_1
$\mathfrak{M}_{367}(1, 2, 0 : 2)$		$\{1, 19\}$	d_1
$\mathfrak{M}_{367}(1, 4, 2_1 : 1)$	h_6^*	$\{8, 17\}$	d_1
$\mathfrak{M}_{367}(1, 4, 2_1 : 2)$	h_6^*	$\{8, 9\}$	d_1
$\mathfrak{M}_{367}(0, 4, 0 : 1)$	h_1^*	$\{1, 19\}$	d_1
$\mathfrak{M}_{367}(0, 4, 0 : 2)$	h_6^*	$\{4, 13\}$	d_1
$\mathfrak{M}_{367}(0, 2, 1 : 1)$		$\{22, 19\}$	d_1
$\mathfrak{M}_{367}(0, 2, 1 : 2)$		$\{22, 19\}$	d_1
$\mathfrak{M}_{368}(0, 4, 2 : 1)$	h_6^*	$\{4, 19\}$	e_2
$\mathfrak{M}_{368}(0, 4, 2 : 2)$	h_6^*	$\{4, 13\}$	e_2
$\mathfrak{M}_{368}(0, 4, 0 : 1)$	h_6^*	$\{0, 17\}$	e_2
$\mathfrak{M}_{368}(0, 4, 0 : 2)$	h_6^*	$\{5, 6\}$	e_2
$\mathfrak{M}_{368}(0, 2, 2 : 1)$	h_2^*	$\{18, 13\}$	e_2
$\mathfrak{M}_{368}(0, 2, 2 : 2)$	h_2^*	$\{4, 8\}$	e_2
$\mathfrak{M}_{368}(0, 2, 2 : 3)$	h_2^*	$\{4, 13\}$	e_2
$\mathfrak{M}_{368}(0, 2, 0 : 1)$	h_2^*	$\{5, 6\}$	e_2
$\mathfrak{M}_{368}(0, 2, 0 : 2)$	h_2^*	$\{1, 9\}$	e_2
$\mathfrak{M}_{368}(1, 2, 0 : 1)$	h_2^*	$\{1, 11\}$	e_2
$\mathfrak{M}_{368}(1, 2, 0 : 2)$	h_2^*	$\{1, 0\}$	e_2
$\mathfrak{M}_{368}(1, 4, 0 : 1)$	h_6^*	$\{1, 17\}$	e_2
$\mathfrak{M}_{368}(1, 4, 0 : 2)$	h_6^*	$\{1, 9\}$	e_2
$\mathfrak{M}_{368}(2, 2, 0 : 1)$	h_2^*	$\{17, 0\}$	e_2
$\mathfrak{M}_{368}(2, 2, 0 : 2)$	h_2^*	$\{3, 15\}$	e_2
$\mathfrak{M}_{377}(2, 4, 4 : 1)$		d_1	d_3

$\mathfrak{M}_{377}(2, 4, 4 : 2)$	$\begin{array}{ c c c } \hline \times & \times \times & \times \times \\ \hline \times & & \\ \hline \times & & \\ \hline \end{array}$	d_3	d_1
$\mathfrak{M}_{378}(6, 4, 8 : 1)$	$\begin{array}{ c c c } \hline & & \times \\ \hline \times & & \times \\ \hline \times & & \times \\ \hline \end{array}$	d_1	e_1
$\mathfrak{M}_{378}(6, 4, 8 : 2)$	$\begin{array}{ c c c } \hline \times & & \times \\ \hline \times & & \times \\ \hline \times & & \times \\ \hline \end{array}$	d_1	e_3
$\mathfrak{M}_{378}(6, 2, 4 : 1)$	$\begin{array}{ c c c } \hline \times \times & \times & \times \\ \hline & & \\ \hline \times & \times & \times \\ \hline \end{array}$	d_1	e_2
$\mathfrak{M}_{378}(6, 2, 4 : 2)$	$\begin{array}{ c c c } \hline \times & & \times \\ \hline \times & & \times \\ \hline \times & & \times \\ \hline \end{array}$	d_1	e_2
$\mathfrak{M}_{378}(2, 2, 8 : 1)$	$\begin{array}{ c c c } \hline \times & & \times \times \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}$	d_1	e_1
$\mathfrak{M}_{378}(2, 2, 8 : 2)$	$\begin{array}{ c c c } \hline & \times & \times \times \\ \hline \times & & \times \\ \hline & \times & \times \\ \hline \end{array}$	d_1	e_3
$\mathfrak{M}_{378}(2, 2, 4 : 1)$	$\begin{array}{ c c c } \hline \times & \times \times & \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}$	$\begin{array}{ c c c } \hline \times \times & & \times \\ \hline \times \times & & \times \\ \hline \times \times & \times \times & \times \\ \hline \end{array}$	e_1
$\mathfrak{M}_{378}(2, 2, 4 : 2)$	$\begin{array}{ c c c } \hline \times & & \times \times \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}$	$\begin{array}{ c c c } \hline \times \times & \times & \times \times \\ \hline \times \times & \times & \times \\ \hline \times \times & \times & \times \\ \hline \end{array}$	e_1
$\mathfrak{M}_{378}(2, 4, 8 : 1)$	$\begin{array}{ c c c } \hline & \times & \times \times \\ \hline & \times \times & \times \\ \hline \times & \times & \times \\ \hline \end{array}$	d_1	e_3
$\mathfrak{M}_{378}(2, 4, 8 : 2)$	$\begin{array}{ c c c } \hline \times & \times \times & \\ \hline & \times & \times \\ \hline & \times & \times \\ \hline \end{array}$	d_1	e_1

$\mathfrak{M}_{388}(2, 2, 7_2 : 1)$		e_1	
$\mathfrak{M}_{388}(2, 2, 7_2 : 2)$		e_1	
$\mathfrak{M}_{388}(2, 4, 5_2 : 1)$		e_2	
$\mathfrak{M}_{388}(2, 4, 5_2 : 2)$	h_2^*	e_1	
$\mathfrak{M}_{388}(2, 6, 3 : 1)$	h_9^*	e_3	e_2
$\mathfrak{M}_{388}(2, 6, 3 : 2)$		e_3	e_2
* * * * * * * * * *	* * * * * * * * *	* * * * * * * * *	* * * * * * * * *
$\mathfrak{M}_{556}(4_1, 0_2, 0_2 : 1)$	O_2	O_4	$\{0, 19\}$
$\mathfrak{M}_{556}(4_1, 0_2, 0_2 : 2)$	O_2	O_4	$\{9, 19\}$
$\mathfrak{M}_{558}(4_1, 6, 6 : 1)$	O_6		e_1
$\mathfrak{M}_{558}(4_1, 6, 6 : 2)$	O_2		e_2
$\mathfrak{M}_{558}(4_1, 2, 2 : 1)$		O_5	e_1
$\mathfrak{M}_{558}(4_1, 2, 2 : 2)$	O_3		e_2
$\mathfrak{M}_{558}(2, 6, 2 : 1)$	O_2		e_2

$\mathfrak{M}_{558}(2, 6, 2 : 2)$	O_6		e_1
$\mathfrak{M}_{567}(2, 4_2, 0 : 1)$		$\{12, 16\}$	d_1
$\mathfrak{M}_{567}(2, 4_2, 0 : 2)$		$\{12, 21\}$	d_1
$\mathfrak{M}_{568}(0_2, 2, 1_2 : 1)$	O_4	$\{3, 4\}$	e_2
$\mathfrak{M}_{568}(0_2, 2, 1_2 : 2)$	O_5	$\{13, 19\}$	e_1
$\mathfrak{M}_{568}(0_2, 4_2, 0 : 1)$	O_3	$\{3, 0\}$	e_1
$\mathfrak{M}_{568}(0_2, 4_2, 0 : 2)$	O_2	$\{1, 19\}$	e_1
$\mathfrak{M}_{568}(0_2, 4_2, 2 : 1)$	O_3	$\{8, 20\}$	e_1
$\mathfrak{M}_{568}(0_2, 4_2, 2 : 2)$	O_2	$\{9, 22\}$	e_1
$\mathfrak{M}_{568}(1, 6, 0 : 1)$	O_2	$\{1, 17\}$	e_2
$\mathfrak{M}_{568}(1, 6, 0 : 2)$	O_2	$\{0, 17\}$	e_2
$\mathfrak{M}_{577}(2, 2, 8_1 : 1)$			d_1
$\mathfrak{M}_{577}(2, 2, 8_1 : 2)$		d_1	
$\mathfrak{M}_{588}(2, 6, 3 : 1)$		e_3	e_2
$\mathfrak{M}_{588}(2, 6, 3 : 2)$	O_6	e_1	
*****	*****	*****	*****
$\mathfrak{M}_{667}(0_1, 0, 0 : 1)$	$\{4, 13\}$	$\{19, 16\}$	d_1
$\mathfrak{M}_{667}(0_1, 0, 0 : 2)$	$\{4, 13\}$	$\{2, 7\}$	d_1
$\mathfrak{M}_{667}(0_1, 0, 2_2 : 1)$	$\{4, 13\}$	$\{17, 22\}$	d_1
$\mathfrak{M}_{667}(0_1, 0, 2_2 : 2)$	$\{17, 11\}$	$\{10, 16\}$	d_1

$\mathfrak{M}_{668}(1, 0, 0 : 1)$	$\{11, 19\}$	$\{1, 19\}$	e_1
$\mathfrak{M}_{668}(1, 0, 0 : 2)$	$\{11, 17\}$	$\{0, 17\}$	e_2
$\mathfrak{M}_{668}(1, 2, 2 : 1)$	$\{17, 22\}$	$\{9, 22\}$	e_1
$\mathfrak{M}_{668}(1, 2, 2 : 2)$	$\{19, 22\}$	$\{8, 22\}$	e_2
$\mathfrak{M}_{668}(0_2, 0, 2 : 1)$	$\{11, 17\}$	$\{8, 4\}$	e_2
$\mathfrak{M}_{668}(0_2, 0, 2 : 2)$	$\{11, 17\}$	$\{13, 4\}$	e_2
$\mathfrak{M}_{677}(0, 0, 8_1 : 1)$	$\{19, 21\}$	d_1	
$\mathfrak{M}_{677}(0, 0, 8_1 : 2)$	$\{19, 1\}$	d_1	
$\mathfrak{M}_{677}(2_2, 0, 4 : 1)$	$\{5, 22\}$	d_1	d_3
$\mathfrak{M}_{677}(2_2, 0, 4 : 2)$	$\{9, 22\}$	d_1	d_3
$\mathfrak{M}_{678}(0, 1_2, 6_1 : 1)$	$\{0, 7\}$		e_2
$\mathfrak{M}_{678}(0, 1_2, 6_1 : 2)$	$\{0, 8\}$		e_2
$\mathfrak{M}_{678}(0, 0, 8 : 1)$	$\{13, 19\}$	d_1	e_3
$\mathfrak{M}_{678}(0, 0, 8 : 2)$	$\{13, 4\}$	d_1	e_3
$\mathfrak{M}_{678}(0, 2, 4 : 1)$	$\{13, 4\}$	d_1	e_3
$\mathfrak{M}_{678}(0, 2, 4 : 2)$	$\{13, 19\}$	d_1	e_2
*****	*****	*****	*****
$\mathfrak{M}_{778}(8_1, 6_1, 6_1 : 1)$			e_2
$\mathfrak{M}_{778}(8_1, 6_1, 6_1 : 2)$			e_2
$\mathfrak{M}_{778}(4, 4, 8 : 1)$	d_1		e_2
$\mathfrak{M}_{778}(4, 4, 8 : 2)$		d_1	e_2
*****	*****	*****	*****

$\mathfrak{M}_{888}(3, 7_1, 3 : 1)$	e_2	e_3	<table border="1"> <tr><td></td><td></td><td>x</td><td>$\times \times$</td></tr> <tr><td></td><td>x</td><td>$\times \times$</td><td>x</td></tr> <tr><td>$\times \times$</td><td>x</td><td>$\times \times$</td><td></td></tr> <tr><td></td><td></td><td>x</td><td></td></tr> </table>			x	$\times \times$		x	$\times \times$	x	$\times \times$	x	$\times \times$				x	
		x	$\times \times$																
	x	$\times \times$	x																
$\times \times$	x	$\times \times$																	
		x																	
$\mathfrak{M}_{888}(3, 7_1, 3 : 2)$	e_2	e_3	<table border="1"> <tr><td></td><td>x</td><td>$\times \times$</td></tr> <tr><td>x</td><td>$\times \times$</td><td>x</td></tr> <tr><td></td><td>$\times \times$</td><td>x</td></tr> <tr><td></td><td>$\times \times$</td><td>x</td></tr> </table>		x	$\times \times$	x	$\times \times$	x		$\times \times$	x		$\times \times$	x				
	x	$\times \times$																	
x	$\times \times$	x																	
	$\times \times$	x																	
	$\times \times$	x																	

References

- [1] F. BUEKENHOUT: The basic diagram of a geometry, Lecture Notes, Springer, **893**(1981).
- [2] F. BUEKENHOUT, M. DEHON, D. LEEMANS: *All geometries of the Mathieu group M_{11} based on maximal subgroups*, Experimental Math. **5** (1996), 101–110.
- [3] J. H. CONWAY, R. T. CURTIS, S. P. NORTON, R. A. PARKER, R. A. WILSON: An Atlas of Finite Groups, Oxford Univ. Press, London 1985
- [4] R. T. CURTIS: *A new combinatorial approach to M_{24}* , Math. Proc. Camb. Phil. Soc. **79** (1976), 25–42.
- [5] M. DEHON, D. LEEMANS: *Constructing coset geometries with Magma: an application to the sporadic groups M_{12} and J_1* , Atti Sem. Mat. Fis. Univ. Modena, to appear.
- [6] N. KILIC: Residually connected geometries for M_{22} , Ph.D. thesis, UMIST, Manchester, 2002.
- [7] E. A. KOMISSARTSCHIK, S. V. TSARANOV: *Construction of finite groups amalgams and geometries. Geometries of the group $U_4(2)$* , Commun. Algebra **18**(1990), N4, 1071–1117.
- [8] D. LEEMANS: *The rank 3 geometries of the simple Suzuki groups $Sz(q)$* , Note di Mat. **19** (1999), 43–63.
- [9] D. LEEMANS: *The residually weakly primitive pre-geometry of the Suzuki simple groups*, Note di Mat. **20**(2001), 1–20.
- [10] D. LEEMANS: *The residually weakly primitive geometries of M_{23}* . Preprint, 2001.
- [11] D. LEEMANS: *The residually weakly primitive geometries of J_2* . Preprint, 2001.
- [12] D. LEEMANS: *The residually weakly primitive geometries of M_{22}* . Preprint, 2001.
- [13] M. A. RONAN, S. D. SMITH: *2-local geometries for some sporadic groups*, AMS Symposia in Pure Mathematics 37 (Finite Groups). American Math. Soc., 1980, 283–289.
- [14] M. A. RONAN, G. STROTH: *Minimal parabolic geometries for the sporadic groups*, Europ. J. Combinatorics, 5(1984), 59–91.
- [15] S. V. TSARANOV: *Geometries and amalgams of J_1* , Comm. Algebra **18**(1990), N4, 1119–1135.